HYGEIA

The HEALTH MAGAZINE

PUBLISHED BY THE AMERICAN MEDICAL ASSOCIATION

May, 1934 25 Cents

Diabetes Birthmarks

Blood: Confusions about Transfusions

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HYGEIA

THE HEALTH MAGAZINE

Published by
the American Medical Association

Edited by Morris Fishbein, M.D.

Volume 12 Number 5

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CONTRIBUTORS TO THIS ISSUE

● Dr. John A. Glassbury has contributed many articles to Hygeia, among them being "Why Stutter?" and "Does the Baby Talk?" . . . Dr. Norman Goldsmith, a frequent contributor, stresses some first aid "don'ts." . . . Clennie E. Bailey clears up some common confusions about blood transfusions.

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● Dr. E. M. Bluestone is director of the Montefiore Hospital for Chronic Diseases. . . . Marguerite S. Hopkins, instructor in costume design, and Fannie Potgieter, instructor in textiles and clothing, Iowa State College, furnish instructions for the making of orthopedic play garments. . . . Alfred E. Parker, physical education instructor, Berkeley (Calif.) High School, deals with an extremely important subject.

● Dr. Joseph Jordan Eller, assistant professor of dermatology, New York Post-Graduate Medical School and Hospital, contributes a radio address which was delivered under the auspices of the New York Academy of Medicine and the New York Tuberculosis Association. . . . Dr. W. W. Bauer, associate editor of Hygeia, presents a flippant fable concerning a fatuous father and an equally foolish mother. . . . Susan Beach discusses sanitary equipment in the home.

● Dr. Rollin H. Stevens is a recognized authority on mushrooms. His warnings and observations, as told to Wendell Holmes, are presented for the benefit of amateur mushroom hunters. . . . Dr. E. S. Rademacher is a member of the department of psychiatry, Yale University, and clinical director, Connecticut Society for Mental Hygiene. . . . Doris W. McCray, food consultant, discusses the sieved vegetables accepted by the Committee on Foods.

● Ivah Simpson tells of the adventures of Blotto Ink and Snoopy, the cat, and gives directions and a pattern for making Blotto Ink. . . . Continuing their series, "I Want to Know," Dr. Oscar Reiss, associate professor of pediatrics, University of Southern California Medical School, and Dorothy Walter Baruch, instructor in education, Whittier College, tell "What Happens When You Light the Light and When You Do Some Other Things."

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MAY, 1934

Health Questions and Answers

PEOPLE everywhere have become interested in the problems of disease control and in the maintenance of health. Almost a dozen columns on health are syndicated successfully in the newspapers. Thousands of letters containing questions are received by the writers of these features and by the radio health speakers on the American Medical Association programs. Some of these questions are answered through the published columns, while many correspondents receive their replies by mail. The Question and Answer Department of HYGEIA, a regular and popular feature of the magazine, affords an interesting key to the trends of this interest in health.

In 1933, HYGEIA received more than 4,500 letters asking general questions about health. This is in addition to the many thousands of letters from nonmedical inquirers received and answered by other departments of the American Medical Association. Most letters asked more than one question, the average being about 136 questions for each one hundred letters. One letter out of every ten asked, either exclusively or in addition to other questions, about books dealing with health subjects. Questions about books, in fact, led the list of subjects. This was true also in 1932. Next in order of interest, occurring in the proportion of one letter out of every fifteen, were questions about food and diet, while questions about the hair and the scalp came next; these were found in one letter out of eighteen. These two subjects virtually shared second place in 1932, occurring then in one letter out of fifteen.

FOURTH in order of interest in 1933 were inquiries having to do with the bones and joints, mainly arthritis and rheumatism; one letter out of twenty-one contained such questions. In 1932, questions asking information about sex, not including birth control or diseases of the reproductive organs, were fourth in frequency but had dropped to sixth place in 1933. "Beauty" questions were fifth in 1933, as compared with sixth in 1932. Seventh place in 1933 was taken by questions relating to drugs; in 1932 this place had been occupied by questions dealing with maternal and infant health. In 1932 questions about drugs had been

EDITORIAL

twenty-fifth on the list; those about maternal and infant welfare, which had been seventh, had dropped to eighteenth place in 1933.

In eighth place in 1933, represented by one letter out of thirty, was a subject not even mentioned in the first twenty-five places in 1932. This was allergy or sensitization, a topic of growing interest to sufferers from hay fever, asthma, certain forms of eczema and other types of sensitization to protein substances that are ordinarily innocuous.

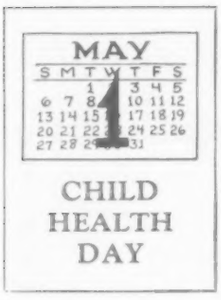
NINTH in the 1933 list were questions dealing with physical therapy, an interesting commentary on the growing public interest in the mechanization of medicine and the employment of massage, baths, heat, light, electricity and other physical forces used in the treatment of disease. This was eighteenth in order of frequency in 1932. Diseases peculiar to women were tenth in the list for 1933, as compared with ninth in 1932.

Other subjects in the first twenty-five topics of most common interest to HYGEIA readers were, in the order named, constipation, eyes and vision, choosing a doctor, diseases of the heart and of the blood vessels, mouth hygiene (including halitosis and mouth washes), cancer, ears and hearing, infant and maternal hygiene, tuberculosis, cod liver oil preparations or substitutes, nose and sinuses, diabetes, the thyroid gland and metabolism, obesity and reducing, and acne or pimples. Two topics which had been among the first twenty-five in 1932, namely blood diseases and colitis, were displaced in 1933 by the increased interest in questions relating to allergy and metabolism.

EACH year, so-called "cures" for incurable diseases were offered to HYGEIA, mostly by persons whose letters bore the mark of sincerity, but not a few demanded cash for the disclosure of their "secrets."

HYGEIA'S correspondence covers the entire United States from coast to coast. The letters originate in homes of all characters; they come from writers with a liberal education as well as from those with almost none. A good general education does not seem to carry with it any guarantee of wisdom in health matters.

The letters prove that America is health-conscious, but they prove also that much remains to be accomplished before America can be said to be intelligently health-conscious. The emphasis on personal appearance, evidenced by the prevalence of questions about hair, scalp and "beauty," as compared to the apparent apathy toward real health problems, which is shown by the infrequency of questions on the more important topics, proves that health instruction is a big and important job.



The Prevention of Speech Disorders

By JOHN A. GLASSBURY

THIS IS an age of disease prevention, and the future of medicine lies in the field of that ounce of prevention which is worth a pound of cure. Periodic health examinations are advocated by all medical authorities. Prophylactic inoculations against typhoid, smallpox, diphtheria and other infectious diseases are established routine procedures. Child hygiene is a recognized field. Oral hygiene has reached the distinction of a profession, and the dental hygienist devotes his energies to the prevention of dental decay. The pediatrician, or child specialist, has practically eliminated the intestinal and nutritional disorders which were the causes of the high infant mortality of not long ago. The ear, nose and throat specialist by the prophylactic removal of diseased tonsils and the drainage of infected sinuses has reduced the frequency of occurrence of St. Vitus' dance, rheumatism and heart ailments in the young. The psychiatrist with his mental hygiene and the psychologist with his psychometric tests have helped to a proper sympathetic understanding of the retarded child. Physical therapy, dietetics, physical training, and mental and physical hygiene are all doing their share to develop a healthy mind in a healthy body.

Chaos, confusion and misunderstanding arise when foreigners think in their own tongue but try to talk in English.

But what has been done for the prevention of speech disorders? Speech, the attribute which the gods have given to man and to man alone, the most distinguishing quality between the human being and the animal, the faculty which needs as much care, training and education as any other hygienic specialty, is sorely neglected, and defects in it are allowed to develop. Speech disorders are preventable! It is time that it is realized that the foundations for normal speech are laid in childhood and that the speech process is closely associated on the one side with the mental and nervous make-up and on the other side with the condition of the ears, nose, throat, mouth, teeth and general physical health. This affiliation can be readily appreciated when the causes of speech disorders are studied.

I classify speech disorders under the two general headings of stuttering, or stammering, which I consider synonymous, and defective phonation. Though there is a variation of opinion as to the differentiation between stuttering and stammering, I believe that since the causation and treatment are the same in the two cases, for practical purposes the two conditions are one and the same. Under the classification of defective phonation I include loss of speech, lisping, persistent baby talk, nasality, hoarseness, falsetto voice, imperfect pronunciation, perverted speech, speech conflicts, retarded speech development and foreign accent.

The causes of stuttering, or stammering, are classified as predisposing, exciting and aggravating. The predisposing causes are heredity

and a neuropathic constitution. Some authorities think heredity is the most important factor, and it is undoubtedly true that stuttering is found in succeeding generations in families. Great care must be taken, however, to distinguish between what is imitation from contact and what is due to a neuropathic taint. The importance of eugenics and the avoidance of association with a stutterer cannot be overemphasized. A child imitates the kind of speech he hears; and if he hears stuttering, this speech disorder may develop.

The exciting causes are nervous shock, mental injury and imitation. Some of these exciting causes are fright, operation, change of environment, injury, exhaustion following the diseases of childhood, or severe acute infections. One child began to stutter the day after he boarded the steamer for emigration to the United States, another when he was threatened with a knife, another when he was abruptly called on to recite in the classroom, another on starting to school for the first time, another after being taunted with the cry "red-head" by his playmates, another after being told a lurid ghost story and still another in imitation of his father. All these causes were preventable. It is therefore important as part of the hygiene of speech that supersensitive children shall be carefully guarded against unnecessary mental shocks and psychic insults.

Finally, though stuttering is primarily a mental affliction, there are physical factors that may be associated with it to act as aggravators. For the most part these are pathologic conditions in the ear, nose, mouth and throat, such as cleft palate, harelip, intranasal obstructions, adenoids, tongue-tie, deformities of the jaws, missing teeth and defective dental arches. These causative factors can be corrected, and the chances of developing speech defects will be minimized.

Adenoids may cause speech defects directly by bringing about a relaxation of the soft palate and preventing its normal activity in talking or by interfering with the head resonance, making the voice muffled, nasal and indistinct. Indirectly or reflexly, adenoids affect the nervous system and aggravate nervous irritability. Temporary speech disorders often occur after tonsil and adenoid operations. Not uncommonly after removal of the tonsils and adenoids the patient regurgitates liquids through the nose, and his speech is nasal in quality. Usually the condition clears up spontaneously in a week or two. When the difficulty persists, it should not be neglected, for it means that there is a failure of function on the part of the soft palate and its prolongation, the uvula. Abnormal length and thickness of the uvula may impair speech either by pulling on the soft palate and preventing its rising with the vowels or by acting as a foreign body in the throat and obstructing free articulation. This speech disorder is preventable and is easily cured by nipping the unnecessary portion of the uvula.

Cleft palate speech is characterized by a pronounced nasality of all the vowel sounds, an inability to pronounce the dentals *t* and *d*, the labials *p* and *b*, the palatals *k*, hard *g* and hard *c*, and an incorrect pronunciation of the labiodentals *f*, *v*, *l* and *r* and the sibilants *s and z*. The speech defect is due to a failure of function on the part of the palate. The soft palate and uvula serve to close up the posterior passage to the nose during speech. This closure takes place in the production of all the forty-three sound units in the English language, except three, the nasal sounds *n*, *m* and *ng*. When there is a cleft of the palate, there is a failure in closure, and the breath stream, instead of being directed downward to issue through the mouth, escapes into the nasal cavities, and the speech produced is nasalized or of a snorting quality. The speech defect can be reduced by surgical closure of the cleft. The earlier the operation is performed, the better are the results.

Lisping is often a preventable form of speech disorder. Although it is normal to young children and is known then as "baby talk," it should not be encouraged or neglected, for in adults it develops into a serious defect, causing emotional disturbances and unintelligibility of speech. Central lisping occurs during the period of the second dentition and is caused by the loss of the front teeth. Lateral lisping is caused by malocclusion of the side teeth. This speech disorder may in many instances be prevented by proper dental attention. Other causes of lisping are harelip, weak labial muscles, short frenum with tongue-tie, deformities of the jaws, cleft palate, adenoids and paralysis of the muscles of the palate or tongue. A harelip or a cleft palate requires oral surgery. Dental defects can be corrected by the orthodontist. A tongue-tie should be liberated. The tongue may be said to be tied when it cannot protrude beyond the margin of the teeth. Obstructions in the nose and throat should be removed. The ears should be carefully examined, for if a child cannot hear well, he misses the finer shades of speech and develops an incorrect pronunciation.

Every teacher of speech will warn parents against the use of baby talk in speaking to the child. Why? A child develops the kind of speech he hears and stores up this speech in his unconscious mind in the form of word images. The baby word images are retained in the auditory speech centers, and these images then appear to him in later life as the auditory symbols of the words he hears daily, as a result of which he uses baby talk under the impression that he is actually reproducing the sounds he hears. Once this habit of baby talk is established, it is difficult to eradicate it, for the child believes he is talking correctly and is entirely

unaware of his defect. It is therefore of the utmost importance to discourage baby talk at its start.

The causes of delayed speech may be considered under two headings, central and peripheral. The central causes are brain diseases such as sleeping sickness, cerebral hemorrhage, severe infections, the eruptive fevers of childhood and feeblemindedness. Many of these causes are preventable in nature. Cerebral hemorrhage, brain injuries and other obstetric complications can be avoided by proper maternal care and delivery. Unnecessary exposure to infectious diseases should be avoided. Because of a temporary depression of the mental faculties, a child may cease to talk after a severe attack of scarlet fever. The peripheral causes of this loss of speech are deafness and paralysis of the tongue. Deafness may be congenital, but I have seen cases in which children could not hear because of hardened wax in the ear canal. If a child, who at one time has talked, discontinues speech, the nose and throat should be carefully examined for adenoids, tumors of the back of the nose and throat, and constricting bands holding the tongue down to the muscles around the tonsils.

In the big cities of this country where there is a large foreign population there is a curious but nevertheless serious form of speech defect caused by the attempt to adhere to the mother tongue and at the same time to speak in English. Persons who make this attempt think in one language and talk in another. The conflict between the old and the new forms of speech prevents free expression, engenders hesitation, causes the substitution of foreign words, perverts meanings and produces general confusion and inability to be understood. As a consequence, a secondary emotional disturbance is developed which may range from a simple embarrassment to a deep depression, depending on the temperament of the individual. These polyglots have not only a speech defect but also a change in personality. Proper environmental adjustment cures the condition.

The function of speech is only a part of the bodily properties, and what affects the whole affects the part. Consequently the body as a whole must be guarded in order to avoid the development of speech disorders. Malnutrition, general debility, secondary anemias, paralyses, tics, habit spasms, choreas and disturbances of the glands of internal secretion must be corrected to assure a healthy speech foundation. In short, the hygiene of speech is the hygiene of the entire body with particular attention to the vocal tract, the ears, nose, mouth and throat. Finally, the mental development of the child must be carefully supervised. Relaxation, proper breathing habits, good posture, muscular development, poise, self control and mental balance are some of the requisites of good speech. Since we think in words, the child's ability to use words may be considered as an index to his intellectual capacities. Speech disorders are preventable, and the way to prevent them is by speech hygiene!

STOP! LOOK! and LISTEN! to Child Health Needs

THE tenth anniversary of National Child Health Day will be observed on May 1. In the years since its initiation by the American Child Health Association, the observance of the day has undergone significant changes until today perhaps its greatest value is the opportunity it presents to enlist the active interest of groups which otherwise might not give the subject of child health any particular thought, and to draw them into the general program, for the working together of a community is time saving, money saving and sometimes life saving.

Last year's slogan, "Mothers and Babies First," will be continued this year because the Conference of State and Provincial Health Authorities of North America, the body which last year assumed the future responsibility for the national conduct of Child Health Day, believes that adequate care for babies and expectant and nursing mothers must be the foundation on which to build a nation of healthy children.

"There is a special significance in this year's celebration of Child Health Day," Dr. R. H. Riley, director of the Maryland department of health, said, "because children are always among the greatest sufferers during the period of hard times. So, more than ever, the day comes as a challenge to all grown-ups to Stop! Look! and Listen! to the health needs of the babies and young children as well as those of the boys and girls of school age, in their communities."

It has been especially suggested by the Louisiana state board of health that during Child Health Week parents take an inventory of what they are doing for their children. The objective should be the most acceptable and effective living possible for every child. Parents should begin to protect the child before he is born, by carefully following the advice of a physician.

Every child has the right to be assured of a sound mind in a sound body by periodic physical examinations for malnutrition, unsound teeth, colds, adenoids, infected tonsils, childhood diseases, rheumatism, heart defects, poor vision, poor hearing, mental handicaps, emotional upsets and poor health habits.

May Days May Mean—

Warren Boyer

Baseball, for boys—from 6 to 60.

Century—Allen

Greenery, as well as beautiful landscapes.

Keystone View

Daffodils, on farms in Washington's Puyallup Valley. Majestic Mount Rainier looks down on the yellow blossoms.

Ewing Galloway

Robin Red Breast, who chirps his message of spring in practically every section of the country.

FIRST AID DON'TS

By

NORMAN R. GOLDSMITH

Don't rush the victim to the hospital. Wait until adequate, comfortable transportation can be obtained.

WHEN I WAS an intern in the emergency room, scarcely a day passed that a certain type of crowd did not rush excitedly in. With them, there would always be a person covered with blood, his face and theirs growing whiter each minute.

"You had better do something fast, Doc," their leader would shout. "I put a tourniquet on, but it didn't do any good."

I would look at the injured man. On his forearm would be a jagged cut. Above his elbow, perhaps, would be a handkerchief twisted with a lead pencil or stick. His clothing would be soaked with blood from necktie to shoes.

Then I would take the tourniquet off and hold the injured arm high; and almost as if by magic, the bleeding would stop. The crowd would stare, open mouthed. Miracle? No, merely a too loosely applied tourniquet.

The object of a tourniquet is to stop arterial blood, not venous blood. If the tourniquet is applied too loosely, it does not stop the flow from the arteries but simply the return flow from the veins. Thus every contraction of the heart pumps more and more blood out of the body. In fact, when a doctor wants to draw blood from a vein for laboratory tests, he usually uses a loose tourniquet; this makes it easier to obtain blood. Merely taking off an improperly applied tourniquet often stops an excessive flow. Elevation of the affected limb will usually arrest any bleeding except that from a large artery.

This does not mean, however, that tourniquets should be applied too tightly. I recall one case in which a linesman was injured out in the country. In an endeavor to help him, one of his friends put a loop of wire about his arm. This he tightened with his pliers just as though he were fixing a wire on a telegraph pole. He stopped the hemorrhage, but the injured man barely escaped losing his arm. Too much stopping of blood flow starves the part and eventually produces localized death.

The moral is to give first aid intelligently. Wait before applying any tourniquet. Much bleeding will stop of itself if the limb is merely elevated.

There is a false idea of the necessity of speed. Victims of accidents are always *rushed* to the hospital. If one reads the accounts of accidents in any newspaper, one finds statements such as the following: "The ambulance rushed him." "They tore through traffic." "They made the 4 miles in five minutes."

This rushing is absurd. Rarely is any great excess of speed necessary in taking the victim of a wreck to a place of safety. Often he loses more by a dangerous ride to save five minutes than he would by smoother travel taking ten. With three exceptions, severe hemorrhage, asphyxiation and poisoning, there are few conditions in which minutes make a great deal of difference. The urge to take an injured person to the hospital is partly panic and partly the desire to get the person under some one else's responsibility. There is not much logic in it.

A little thought shows the foolishness of trying to rush badly injured persons, especially those suffering from compound fractures. The difference between 40 and 60 miles an hour for

short distances produces slight saving in actual time; but in point of increased risks, the difference is enormous. Speeding through traffic has no particular advantage; it necessitates frequent quick stops, and the shock of these is severe. Rapid changes of pace, such as bursts of speed followed by jamming of brakes, is most nerve-wracking to a sick person; an even speed is the most soothing. There is also the danger of striking another car or a pedestrian and doubling or tripling the severity of the mishap. Almost as frequent as the previous newspaper quotations are the headlines: Two Injured Rushing Patient to Hospital—Ambulance Smashes Sedan—Car Overturns Carrying Victim of Auto Wreck. Often the severity of the accidents incurred in transportation is much worse than the original disaster.

Another point to be considered is that no matter how rapidly a patient is rushed to a hospital, there is usually some necessary delay before any definite treatment can be given. Interns or doctors must be called, operating squads must be assembled, and special instruments must be sterilized. It is much more intelligent to have some one call the hospital, inform the staff that a patient injured in an accident is arriving, and tell the type of injury than it is to burst on an emergency room in great speed and then become enraged because no immediate service can be rendered.

It is best to delay moving a man with a fracture until adequate transportation can be obtained. Touring cars or sedans are hard on persons with leg injuries; besides causing excruciating pain, the cramping and difficulty of getting in and out may often change a simple fracture to a compound fracture or make a compound fracture worse. It is better to be content merely to keep the patient quiet while waiting for an ambulance or until a doctor has seen the patient and properly splinted the injured limb. The back of a truck is much better for transportation than the interior of the most luxurious limousine, because it permits the patient to lie extended and prevents excessive motion and crumpling of the injured leg.

But when I say "don't rush," I do not mean the opposite, delay. Seconds rarely count, minutes may, but half hours and hours are vital spaces of time, not only in the shortening of convalescence but in actual life saving. A wound which may escape infection for fifteen minutes may become badly contaminated in thirty minutes. Shock may go untreated for the first quarter of an hour but not for three quarters. Slight bleeding may be disregarded for half an hour but not for an hour and a half.

Do not wait until the game is over to care for the boy who was spiked in the third inning. In the remaining six innings, staphylococci can cover a lot of bases beneath dirty woolen hose on a hot July day. Do not wait until 3 the next morning to call the doctor when Jimmy is sent home from school at 11 a. m. because of violent cramps in his abdomen; colon bacilli can leap through the mucosa and muscle layers of an inflamed appendix and cause peritonitis in less than six hours.

An ounce of prevention is worth a good deal more than a pound of cure. Fifteen hundred units of antitetanic serum may be worth 150 pounds of life. The happy medium is to proceed with the maximum promptness compatible with the minimum risk to the injured person.

There is also the matter of too enthusiastic medication. I have seen terrific burns caused by the pouring of old solutions of tincture of iodine into wet, gaping wounds. Wetness tends to produce an iodine burn as does also too much iodine or a too highly concentrated solution of it.

Then there is the matter of eye injuries. Most persons are careless in their ocular first aid. They attempt to remove foreign bodies with clumsy or dirty objects when they do not have the requisite skill. A dirty handkerchief is not the best instrument with which to remove a cinder. As in the case of iodine, too strong medication is often employed. Irreparable damage may be done to a delicate cornea by an antiseptic that is too strong.

Laymen do not seem able to comprehend that it is cheaper to call a physician once than to try to cure a condition themselves, to fail, and then to have to call him a dozen times. Self medication is often not only the most expensive mode of treatment but also the most dangerous.

Ears are as molested as eyes. If a bug has crawled into Junior's ear, Father, Mother, various uncles and aunts and the next door neighbors and finally the old woman down the street will try to get it out; and Junior's ear is in a pretty precarious condition by the time he is finally taken to the doctor.

Noses deserve the same attention as ears. It is infinitely better to leave Junior's nose alone when he has pushed a bean or button up it and to take him to a doctor than it is to try to get the foreign object out at home. A word of warning about noses: any infection about them is extremely dangerous. Never irritate or squeeze pimples about the nostrils.

There is another related topic that fits roughly into the subject of first aid. In the presence of abdominal cramps, laxatives should not be given. Too many appendixes have perforated and caused peritonitis because of the wrong use of cathartics. As the late Dr. Deaver used to say, "Purgation means perforation, and perforation means death."

In connection with first aid "don'ts," it is well to remember, first, that there are few cases in which life-endangering speeds are necessary in order to save another life; and second, that conservative undertreatment is safer than the false economy of self treatment or overtreatment.

An Article on Maternal Health in the Interest of the Child

"The Holy Family with St. Margaret and St. John," from the painting by Filippino Lippi.—Photo by courtesy of the Cleveland Museum of Art.

Bearing Better Babies

IN A TEMPLE dedicated to the preservation of the fine arts there is enshrined a magnificent example of Renaissance painting which may well be taken as the symbol for this article. Appearing in translucent colors as though fresh from the brush of Filippino Lippi, it illustrates, in the charming setting of a Florentine landscape, the beauty and symmetry of an ideal family. There is the radiant, modest, beneficent mother holding on her lap the happy, unswathed child in playful, affectionate attitude embracing St. John who kneels before him. Saint Margaret seems deep in adoration. Joseph, leaning his chin on his staff, looks on in a reverential and reflective mood. The child is in perfect physical and mental health. One can well understand how this child would "wax strong in body and mind," and "grow in favor with God and man."

The family relationships within this group are entirely harmonious. The picture is a splendid example of early, watchful child care. One may well believe that this child has been faithfully nourished at his mother's breast and trained in the wholesome habits of a devout Jewish family.

Unfortunately this ideal of family life is not universally appreciated or accepted today. Primitive customs, superstitions, unintelligence, poverty, squalor and ignorance—all those factors which may be grouped under unfavorable social and economic conditions—militate against a normal, healthful motherhood and childhood.

The modern community is well supplied with skilled physicians, dentists, nurses and teachers. Its hospitals and social services are usually ample. Yet many mothers and prospective mothers are without adequate health education and supervision when they are well; often they cannot command expert medical and nursing care when they are sick. The urgent need today, as expressed by Dr. Olin West, Secretary of the American Medical Association, is "the delivery of adequate scientific medical service to all the people, rich and poor, at a cost which can be reasonably met by them in their respective stations in life."

Before this desideratum can be realized, another important matter must receive serious attention. In the words of Maria Franklin Rogers in a recent contribution on parental education, "Modern parents are perturbed because they find themselves incapable of exercising the functions of parenthood on the basis of either native equipment or traditional knowledge. They find that their very young children need a kind of attention which calls for new knowledge and fresh comprehension. They also discover that the influences that play upon their developing children in dominant fashion originate, not within the family group, but in the surrounding community and its institutions."

Motherhood is the crowning glory of womanhood and generally is assumed to be the normal outcome of the marital state. The tenderest

maternal care always should be conserved; but it must be borne in mind that the woman in modern society does not necessarily come to her task of motherhood fully equipped with knowledge and skill to raise her baby successfully. Maternal instinct and traditional ways of bringing up babies do not necessarily guarantee safety. In primitive society, where one thinks of the baby as born and brought up with few frills, the early infant mortality was high and the average life of mothers who bore many children was all too brief. Modern methods of public health have lengthened the lifetime both of mothers and of babies. A scientific study of the rise and fall of populations indicates that the prevailing attitude toward women and children usually determines national destiny.

It always has been difficult to rear successfully the oncoming generation. Nature at its source is prolific even among mankind; but the difficulties and dangers leading to maternal and early infant mortality and morbidity are usually great.

All biologic evidence points to the function of maternity as reserved exclusively to woman. This is her inalienable right and privilege. However, her exercise of this function in civilized society has been severely curtailed by nature, choice, disease or accident. Marriage is shunned or deferred; contraception is practiced; abortion is widespread; syphilis and gonorrhea take their toll, and diseases and accidents incident to pregnancy and childbirth thwart normal maternity.

In 1930 the marital condition of the female population over 15 years old, according to the United States census, was as follows: married, 61.1 per cent; single, 26.4 per cent; widowed, 11.1 per cent; divorced, 1.3 per cent, and unknown, 0.1 per cent.

It is estimated that between 10 and 15 per cent of all marriages are childless. In a considerable proportion of the marriages, only one or two children are born. From a recent case study of 4,000 records of married women in the practice of a leading American gynecologist and obstetrician, it was determined that the average fertility for the women who had reached 40 years was 224 pregnancies for 100 women, of which 63 resulted in abortion and 161 in living children.

During the last century there has been a decrease in the average number of children resulting from each marital union from about five to less than two. Voluntary contraception may account for some of this decrease, especially among the more intelligent families and those which are well conditioned economically. There is no doubt, however, that aside from contraception, sterility has been increasing in America among the upper social classes in large urban centers. The average number of children born to those whose names were added to the 1928-1929 edition of "Who's Who in America" was 2.1 for each family. In active gynecologic practice, from 20 to 25 per cent of the women are sterile; whereas in the general population, the sterility is from 10 to 15 per cent.

The most serious condition, however, from the standpoint both of the mother and of the unborn child, is that of abortion. Statistics taken in a city with a population of almost 1 million show that abortion is responsible for about one third of all the maternal deaths and for an untold amount of suffering and disability among those who survive. It is estimated conservatively that one of every three or four pregnancies ends in abortion. In other words, for every 1,500 conceptions there are only about 1,000 live births which eventuate.

The Russian experience with legalized abortion is far from reassuring. It has by no means proved a panacea for criminal abortion. Reports from Russian gynecologists and obstetricians indicate that both the immediate and the subsequent effects of such abortions are liable to prove serious. Some of the physicians are outspoken in their objections to it. They say, "Chronic inflammation of the uterus and the adnexa, as well as abortions without an end, is the heritage of these years. . . . There is no disease of the female in the causation of which abortion does not play an important rôle. . . . When we report 140,000 abortions a year, we report just that many women on the road to invalidism." The consensus of the best medical minds in Russia regards legalized abortion as a psychic, moral and social evil.

The welfare of the child as an individual really begins at conception. At that moment, heredity is sealed. From that time, the developing organism is completely environed by its mother, whose welfare is intimately linked with that of the baby. A marvelous process, all too little understood by the average prospective mother, is being unfolded under conditions which should be made as favorable as possible during those nine eventful months before the "blessed event" takes place. The velocity of growth is greatest in the prenatal period. During the first 280 days, not only is there an enormous change in the length and weight, but profound alterations occur in the development of the various organs and in their relation to one another. Were it not for the natural intrauterine protective mechanisms, the developing fetus would be exposed to manifold hazards. Birth is simply an incident in the larger life process, an incident fraught, however, with great potentialities for good or ill.

« « By RICHARD A. BOLT » »

During this period the mother should place herself under the care of a competent and skilful physician who has had sufficient experience to sense the possible dangers and who can take immediate steps to correct any untoward condition which may jeopardize her life or that of her unborn child. This means placing herself in the early weeks of pregnancy under such medical supervision and scrupulously following all directions. She should submit to periodic examinations and present herself regularly to check on the urine and the blood pressure. She should seek the best possible advice on the hygiene of pregnancy. This may be obtained from her physician or from a well trained nurse. A number of helpful books are also available. If any questions arise, she should consult her physician, not her next door neighbor!

Maternity and child welfare always go arm in arm. The intimate relationship of the unborn child to the mother should be thoroughly understood. Close as the contact appears to be, repeated scientific investigations have never been able to demonstrate any direct or indirect nervous connections between the fetus and the mother. The blood supplies of the two develop entirely apart and are separated completely in the placenta, the blood of the one having a cell and serum composition different from that of the other. The heart rate of the child immediately before birth is about twice that of the mother.

It is impossible, therefore, to conceive how any psychic or physical maternal impressions could be conveyed directly from the pregnant woman to her unborn child. All such markings are either fanciful or coincidental. Physical markings or stigmas due to nervous impressions on the mother do not actually take place. The only effects which possibly could occur may arise through physical and chemical forces acting by means of osmosis and diffusion through the thin walls in the placenta. The fetus in reality is a parasite growing on its mother. It is entirely dependent on her for its food supply and oxygen and perhaps for some of its hormones and immunizing substances. It is dependent on her also for the elimination of its carbon dioxide and other waste products.

If the growing child is to receive his full growth and development, he must be nourished properly through the mother from the moment of conception. This is a relatively simple matter if the mother is given an adequate dietary. Nature makes ample provisions for the physical and nutritional protection of the unborn child. If food sufficient in quality and quantity is not supplied to the pregnant mother, her own body substances are drawn on to supply the deficiencies. If the mother is not receiving sufficient mineral salts or any other food elements, the fetus will draw on her reserves in the bones and teeth and on her store of fat and protein. This, of course, can go on only to a certain point at which both the mother and unborn child will suffer. It is well known that if the iodine in the mother's dietary is not sufficient, the child may be born with a thyroid deficiency and even be a cretin with marked mental and bodily deficiencies. A very small quantity of iodine added to the dietary of the pregnant mother is all that is necessary to keep the thyroid in balance. Iron is another element which may be lacking. A number of mothers suffer from anemia during pregnancy. The growing fetus must have sufficient iron, and this must be obtained through the mother. It is highly important, therefore, for her to have foods containing iron.

It is a fallacy to believe that the pregnant mother should "eat for two." Excessive feeding may be harmful for both mother and child. A well balanced, wholesome dietary, slightly in excess of her normal requirements is all that is needed to keep the mother in good condition and to provide for the normal growth and development of the fetus. Milk should form an important part of the dietary of every pregnant woman. A delicate balance is set up between the physiologic processes of the mother and her unborn child. In most mothers this balance is fairly stable, but in a certain number it is easily upset.

With all the refinements of modern biochemistry, maternal breast feeding is still the safest and most satisfying for both mother and babe, especially in the early, precarious months. It is true that modern infant feeding can provide suitable substitutes which closely approach the composition of mother's milk, but the ideal condition is the regular and not too frequent feeding of the eager, hungry baby from the maternal source of wholesome, safe milk, if it is of a composition physically adapted to the baby. Much can be done through breast hygiene to make it possible to continue this feeding over the period of greatest danger to the child.

The acute infectious diseases attacking the prospective mother may seriously affect the unborn child by causing the mother to abort. This is the case notably with influenza and the pneumonias. The mother, therefore, should be protected in every way against these diseases. Chronic diseases of the heart or kidneys may have a deleterious effect on the developing fetus and result in premature birth. Tuberculosis and syphilis are especially serious during pregnancy, from the standpoint both of the mother and of her unborn child. It is not a question of the inheritance of these diseases, which really are not inheritable, but of a congenital effect due to the close association of the mother with her unborn child.

In Cleveland during 1933 there were 13,716 live births and 491 still births. In the same year, 604 babies died before reaching 1 year of age. Of these, 423 died under 1 month of age. The

infant mortality rate for Cleveland, therefore, was 44 deaths under 1 year of age for every thousand live births. This is the lowest rate Cleveland has ever had. It is truly a remarkable record and reflects great credit on the health and welfare organizations of the city, which have made this possible by sound and consistent methods. Only 20 deaths from diarrhea and enteritis occurred in children under 2 years of age. In 1910, 923 deaths occurred from the same cause in this age group, and in 1920 the number was 475.

The segment of child life on which efforts should now be concentrated is the neonatal period, since 70 per cent of the deaths under 1 year of age occur during the first month. The chief causes of these deaths are prenatal in origin, resulting in prematurity, toxemias or syphilis. Malformations over which there is no control account for a certain number of deaths. Prematurity and the toxemias are responsible for many early deaths. While the ultimate causes of these conditions are largely unknown, facts are now available which indicate means of prevention. With suitable prenatal care and strict attention to the earliest unfavorable signs, it should be possible to forestall the dangers in many instances.

Special provisions should be made in the hospital to care for babies who arrive before scheduled time. These babies and all others who depart from the normal should be placed immediately under skilled pediatric and nursing care. It would be ideal if every baby could be placed under such care during the first days of life. In some instances, satisfactory arrangements at a fixed sum have been made between the parents and the physician to secure careful guidance and treatment for the baby throughout infancy; this care *(Continued on page 468)*

"Make Motherhood Safe for Mothers"

TWO THIRDS of the maternity deaths in this country are preventable, and 10,000 of the 16,000 women who die annually in childbirth could be saved.

In three previous Mother's Day campaigns, an effort has been made to arouse public sentiment to the importance of these statistics; this year, Mother's Day, May 13, will have as its slogan "Make Motherhood Safe for Mothers," and a definite and specific step will be taken in getting groups in every community to help in diminishing the mortality of motherhood. Women's clubs, men's clubs, medical societies, chambers of commerce and other professional and civic groups will join in community efforts to this end throughout the nation.

Conditions cannot be improved until people study their own local maternity facilities and determine what improvements are needed, Mrs. Shepard Krech, president of the Maternity Center Association, New York, said in explaining the system of blank appraisal forms that will be used in conducting these investigations. The blanks will include such questions as the following: Number of maternity beds. Total number of births in the last year. Number of deaths in the last year. Is organized prenatal nursing provided?

Century-Korth

"Her Son," a statue created by Nellie V. Walker, sculptor.

"There has been a great deal of sentiment surrounding Mother's Day during the time that it has been observed in this country," Mrs. Krech said. "In the last few years there has been a successful effort to direct this fine feeling toward the important subject of saving mothers from unnecessary death. But emotion alone is not enough. We must have facts, pertinent facts, local facts, so that groups in every community may work with their own physicians, health officers, nursing associations and hospital authorities to alter those factors in the situation which are a barrier to safe motherhood.

"Only by an appraisal of maternity facilities in every community, and study of their quality, can the great step forward be taken. These blanks are available free. Prizes are to be awarded those groups which have the highest rating for making a thorough-going survey and presenting a plan for improvement based on that survey. Programs for club meetings are also available."

BLOOD—

CONFUSIONS ABOUT TRANSFUSIONS

By

Clennie E. Bailey

"Doctor, does that mean that my blood is—is bad?"

DO YOU remember the time when a friend of yours called you up and asked whether or not you would be willing to give some of your blood to his sick wife? For, he explained, the doctor at the hospital would not let him give any more; he had already given 3 pints, and the doctor said that she ought to have at least one more transfusion. Being impulsive as well as generous, you were soon telling the clerk at the hospital why you had come. To your surprise you were told that before the transfusion could be made you must first go to the laboratory and have your blood tested. You wondered what there was in your appearance to warrant such a suggestion; but feeling that time was precious, you hurried on as directed. There a woman in a crisp white uniform and with a crisper manner took about 2 thimblefuls of blood from a vein in your arm and then told you to go back to the lobby and wait for a report of the test.

After you had waited for what seemed hours but was really only about forty minutes, the doctor came and informed you that your blood would not do! Then he turned to a thin little woman, who also had been waiting, and told her that her blood was all right. Do you remember how you then broke out in a cold sweat and your tongue stuck to the roof of your mouth from which you were able to extract it barely in time to exclaim, "Doctor, does that mean that my blood is—is bad?"

"Oh no, not at all. It simply means that your blood does not match that of the patient," was the doctor's reply; and he walked on down the hall with the thin little woman, leaving you standing there wondering why in the world your blood would not do. Here you were a strong, husky man simply running over with health and that doctor had had the audacity to say that he could not use your blood but could, instead, use that of a skinny woman who happened to be a neighbor of your friend. You went away wondering whether, after all, politics did not have something to do with it.

No, politics had nothing to do with it. Nor in this case did a state of well being; otherwise you certainly would have been chosen to give your blood to your sick friend, for usually men are given preference over women. The choice was determined by the outcome of the laboratory test for which you gave the 2 thimblefuls of blood. This test is extremely important, for it has saved many lives since its use was discovered about thirty years ago.

The test was made by matching your blood directly against the blood of the patient. This direct method is the one commonly used in large free hospitals where the patients are not able to pay for this service. Practically its only disadvantage, compared with other methods used, is that there is sometimes a delay when a large number of persons have to be tried out before a suitable one is found.

In order to understand better some of the terms used in describing the test, you should first know a few facts about blood in general. When this red, life-giving substance is in its arteries and veins, it is made up of two parts; namely, a liquid and small bodies which are called corpuscles. There are three kinds of corpuscles, but only the red ones are of interest here. They are disk shaped and are only about $\frac{1}{3,200}$ inch in diameter, too small to be seen without the aid of a microscope. However, they make up for their diminutiveness in their numbers, for there are about 5 million in every small drop of blood. The red corpuscles give to blood its characteristic red color. When blood gets out of, or is drawn out of, the vessels, it sets like jelly, or clots, and this jelly-like mass shrinks, squeezing out a clear, yellowish liquid that is known as serum.

Persons who give or who are willing to give their blood for transfusions are designated as donors, while those receiving the blood are called recipients. Since the recipients are usually patients, the latter name is commonly used.

Before you came to the laboratory, one of the technicians had secured from the arm of the patient the same amount of blood as was taken from you. The blood of the patient and the blood of the donor are treated alike in being prepared for the test. Part is allowed to clot, and part is prevented from clotting by the addition of a certain chemical. In the tube where clotting is allowed to take place, the serum is soon squeezed out; and in the tube where clotting is prevented, the red corpuscles float around freely in the blood fluid. In this way both serum and red corpuscles are obtained from the patient as well as from the donor.

The next step is to mix these serums and corpuscles in a particular way and watch their behavior. The mixing process and the reading of the results are simple, but both must be done by workers well trained in the technic.

Two glass slides, 3 inches long and 1 inch wide, and two medicine droppers make up the only equipment used. By means of the droppers, the serum and the red corpuscles of the donor and the patient are mixed in the following manner: On one slide are placed serum from the patient and red corpuscles from the donor. On the second slide, serum from the donor and red corpuscles from the patient are mixed. These mixtures appear on the slides as yellowish red, homogeneous drops about the size of the little finger nail. They are stirred thoroughly and watched for twenty minutes. If at the end of this time, or before, either of these mixtures appears granular, the verdict is that the donor's blood does not match. If the two mixtures remain homogeneous in appearance, the bloods do match.

No doubt your first question is: How does the granular appearance of the mixture tell that the bloods do not match? The answer is: The granular appearance is due to a compact clumping of the red corpuscles into bunches large enough to be seen by the unaided eye. This shows that should the blood of such a donor be transfused into the patient, those clumps of corpuscles would clog any small blood vessel that they entered and thus materially interfere with the functioning of many of the vital organs of the body. If, for example, such a clogging occurred in the capillaries that carry food and oxygen to the heart or to certain parts of the nervous system, death would be instantaneous. Other harmful results occur which are not so well understood. However, no difficulty occurs when patients are given blood from donors whose bloods have been found to match by laboratory tests.

In years past, before blood-matching tests were discovered, transfusions were resorted to only in the most extreme emergencies. The outcome was left to chance as to whether the patient died from the results of the transfusion or from the malady from which he suffered. Today deaths caused from this form of treatment are practically unknown and blood transfusions are used not only with impunity but with great help to patients in many forms of disease.

Blood-matching tests are also made on persons who are to receive and give skin grafts. Skin will not grow on patients when the person who donated the graft is of a different group.

Another question which you might have in mind is: Since my blood does not match that of my friend's wife, does it mean that it will not match the blood of any patient?

Indeed no. The blood of every person matches that of some one else. As a matter of fact, from the standpoint of blood there are four groups of human beings, and the bloods of one group always match the bloods of the members of the same group. Also the blood of the member of any one group never matches the blood of any members of the other three groups. You will see now, I think, that you and your friend's wife belong to different groups. On the other hand, the blood of the neighbor was in the same group as that of the patient. Curiously enough there does not seem to be any special advantage of one group over that of another in regard to the state of one's health.

In the future, then, should you happen once more to have your blood tested for a transfusion and find that it will not do, do not become frightened and begin to wonder where you got that "bad blood." Or do not think that the refusal to use your blood was due to the fact that you did not work for the mayor in the last election! The reason will be, as you now know, that the doctors are trying to save a life and they do not want the capillaries of their patient clogged with clumped red corpuscles, no matter how healthy those corpuscles happen to be.

The Rationale of Breast Feeding

A Modern Concept

By

ABRAHAM TOW

IN THE PRACTICE of medicine, experience has shown that the closer one gets to nature the more likelihood one has of success in the treatment of the patient. At times, however, this principle may be carried too far, and this fact is nowhere better illustrated than in the idea that an infant must have mother's milk, regardless of the cost. No one denies that mother's milk, when it is good, is the best food that can be given to a young infant, but there should not be any hesitancy in weaning a baby when the need arises, and the criteria for substituting a formula are much less rigid today than they were formerly. The explanation is simple.

Modern Sanitation Safeguards Weaning

Weaning today is safer because the tremendous improvement in milk sanitation has reduced the fear of a contaminated milk supply and almost eliminated the danger of infection from that source. Years ago when milk supplies were unhygienically collected, when supervision of dairies was negligible, when the methods of transportation from the farm to the ultimate consumer were poor and such things as refrigerated cars were unknown, the milk often reached the infant loaded with dangerous bacteria. This was especially true in summer, when the warm weather was conducive to the multiplication of germs. Babies by the thousands died of diarrhea, the so-called summer complaint, due to contaminated milk. That is why one still hears that it is dangerous to wean a baby during the warm months. The second summer was also a cause for anxiety. The baby was usually nursed through the first summer; and by the time the warm weather rolled around for his second year, weaning had taken place and he was confronted with the dangers that might lurk in his food supply, especially in his milk.

Today, much progress has been made toward a system of milk inspection in many parts of the country. With the added safeguard of pasteurization, most infants, at least in cities, are assured of clean, safe milk. A reduction in infant mortality has kept pace with the progress in milk sanitation. In the city of New York, cases of summer diarrhea are a rarity. In busy hospital services, where once such patients filled the infants' ward, it is not unusual to go through an entire summer without admitting a single patient with summer complaint. Weaning, therefore, is no longer a question of seasons in communities where there is competent milk supervision.

For the first twenty-four hours after birth the new-born infant needs little fluid. After that he may be fed at intervals of three or four hours, according to the dictates of the attending physician. A generation ago, babies were fed as often as every two hours, or irregularly whenever they cried. Modern precepts hold that the training of the infant is most important and that feedings must be given regularly. With normal infants, even if the weight is only 5 pounds, some mothers have adopted a four hour schedule with but five feedings in the twenty-four hours. The babies are fed at 6 a. m., 10 a. m., 2 p. m. and 6 p. m. and any time between 10 p. m. and 12 p. m. It is felt that a feeding at 2 a. m. is unnecessary, and experience has shown that infants do well without that feeding. It is not a difficult matter to train them to sleep throughout the night. In order to further insure their doing so, the time for the last feeding is made elastic and is given between 10 p. m. and the time the mother retires, usually before midnight.

Disturbed Rest Retards Convalescence

This procedure is of untold benefit to the mother. A woman who has just had a baby has undergone a major operation. She is entitled to every possible consideration. There is no reason why she should have her sleep disturbed to feed her infant. This will only make her convalescence more difficult. As long as the baby does well without the night feeding, it is much more important for the mother to obtain a complete rest. Every effort should be made to train the infant to conform to this schedule. However, it is impossible to expect every infant

to accept this regimen, and if he shows by continual crying at night that he needs this feeding, it must be given to him. Make the picture fit the baby, and not the baby the picture. It has been found that when a baby fails to gain on five feedings, the institution of a 2 a. m. feeding will not often change matters. It is also rare to see an improvement when a change is made from a four hour interval to a three hour interval with the expectation that the more frequent feedings will cause a gain in weight. It is the quality, not the quantity, of the mother's milk that is of the most importance.

Mother's Milk Must Satisfy Two Tests

Failure of the baby to gain on breast milk usually means one thing; the breast milk is no good. One should not make a fetish of mother's milk. Mothers have been seen who suffered miserably to give their babies only one or two nursings a day, when, after thirty or forty minutes of sucking, not only were both the baby and the mother exhausted, but also the baby's hunger had been far from satisfied. The fact that the fluid comes from the maternal mammary gland does not make it good. It may be nothing but water. Favorable reports following chemical examinations do not necessarily indicate that the mother's milk is good for her child. Mother's milk must satisfy one test, or rather two tests. It must satisfy the baby, and it must make him gain. The chemist's analysis is not important. His report may be splendid, but if the baby cries or fails to gain, the milk is not good for him. He must be weaned. A combination of breast and bottle is often used, but I believe that this is evading the issue. If the breast milk does not satisfy, why should one use it at all?

Babies cry because they are hungry or because they are spoiled. One would certainly rather have a satisfied, contented baby, gaining regularly on a formula, than a whining, fretting infant who is gaining little or not at all on breast milk. Do not let me create the wrong impression. Breast milk is the food of first choice. But, in an endeavor to maintain breast feeding, one must not forget that the baby must be satisfied and made to gain.

Maternal Diet and Disposition Are Important

A galactagog is a substance intended to stimulate the production of milk. There is no efficient galactagog. The most important factor in the production of good breast milk is an equable state of mind on the part of the mother. The ingestion of large quantities of milk, beer or other fluids tends only to make her stout and unhappy. From 1 to 1½ quarts of milk daily should be sufficient. The diet should be simple, and there are no restrictions except the dictates of common sense. One cannot tell in advance what food, if any, will disagree with the baby. The nursing mother should take plenty of exer-

Weaning today is safer because of the tremendous improvement in milk sanitation. The automatic milkers and the intricate machines which fill and seal milk bottles have displaced bacteria-laden human hands.

Photos courtesy of Sheffield Farms Company

cise and have regular habits and, above all, she should try to be of a calm, even disposition.

Formerly only severe illnesses, such as tuberculosis, diabetes or chronic nephritis, on the part of the mother, were accepted as legitimate reasons for weaning a baby. Wetnurses were in demand; today they are seldom used. The reasons for weaning are many. From the infant's side they may be broadly summarized as failure of the breast milk to produce a gain in weight. From the maternal point of view I feel that weaning is permissible in all conditions that interfere with the mother's return to a state of well being, provided the milk supply of the community is above suspicion. The mother should not undergo any suffering or special sacrifices to feed her baby. In communities where diarrheal diseases in infants occur, the requirements are much more strict. The world has made progress since the days when breast feeding was an absolute necessity for a healthy baby. Credit goes to the milk commissions and to the simplification of the methods of artificial feeding.

HEALTHGRAMS ✣ from Articles in This Issue

¶In 1930 the marital condition of the female population over 15 years old, according to the United States census, was as follows: married, 61.1 per cent; single, 26.4 per cent; widowed, 11.1 per cent; divorced, 1.3 per cent, and unknown, 0.1 per cent. *See page 400*

¶In Europe during the World War, the occurrence of diabetes was diminished in countries where the supply of food was lessened, and in this country with a decrease of luxuries during the war the death rate from diabetes decreased. *See page 409*

¶Children have actually stated in clinic examinations that if they wanted to obtain a request from one parent, the scheme of showing affection or attention to the other would invariably bring the desired results. *See page 440*

¶The school physician needs the cooperation of the parent so that he may be helped to make every school child 100 per cent fit—well nourished, keen of sight and hearing, free from dental decay, sound in heart, lung and limb, and mentally and emotionally adjusted to life. *See page 446*

¶If it were not for our brain and nerves we would be very much like plants that just grow without sense, without sight, without sound and without being able to move. *See page 454*

¶Professor Hodge of the University of Florida estimates that from May 1 to August 1, a pair of flies produces 5,746,670,500 flies. *See page 426*

¶Although it takes much more time and patience to let the child help himself, that is the best plan for his development. *See page 416*

¶In general any mushroom that deposits white spores and has a cup at the base or a wart-covered cap should be rejected. *See page 435*

¶Ordinarily it is better not to mix sieved vegetables with milk for the baby, since he may become tired of the mixture more easily than of the two foods taken separately. *See page 442*

¶In connection with first aid "don'ts," it is well to remember, first, that there are few cases in which life-endangering speeds are necessary in order to save another life; and second, that conservative undertreatment is safer than overtreatment. *See page 398*

¶From the standpoint of blood there are four groups of human beings, and the bloods of the members of one group always match the bloods of the members of the same group but never match the other three groups. *See page 404*

¶The major activities of a hospital and of its staff may be summed up under the headings of preventive medicine, diagnosis, therapy, teaching and research. *See page 420*

¶Overalls are a simple solution for orthopedic play garments for boys because they are easily put on and, when worn without shirts, they are "sun-back." *See page 419*

¶"Baby talk" should be discouraged, for in adults it develops into a serious defect, causing emotional disturbances and unintelligibility of speech. *See page 394*

¶After a short incubation period, ordinary carpet dirt contains from 99,400,000 to 11,558,800,000 bacteria in each ounce. *See page 429*

¶Mother's milk must satisfy the baby, and it must make him gain. *See page 406*

¶There is absolutely no scientific basis for the superstitions about birthmarks. *See page 433*

DIABETES: A Public Health Problem

By
Michael G. Wohl

In Europe during the World War, the occurrence of diabetes was diminished in countries where the supply of food was lessened.

DIABETES MELLITUS is not a new disease. The Greeks recognized this malady 1,500 years ago and gave it its descriptive name "diabetes," which means "passing through"; this describes the most characteristic symptom of the disease, the passing of enormous quantities of fluid waste material by the kidneys.

It is, however, within the past two decades that science has obtained important knowledge about this disease and has learned how to control it. While in former years a person suffering from diabetes had a gloomy outlook in life, today with intelligent care a person with diabetes is not hopeless and can be restored to a state of good health. A diabetic person under proper control need not consider himself different from any other person.

Has the incidence of diabetes increased in this country? In 1880 the death rate from diabetes in the registration area was 2.8 for each hundred thousand persons. In 1925 the public health statistics indicated an increase to 16.1 for each hundred thousand. This increase may be due to the fact that today the disease is recognized much earlier and is more accurately diagnosed. It is interesting to note that deaths from diabetes in Philadelphia during 1931, according to the department of public health of that city, were six times greater among married women than among single women. The figures correspond almost exactly with statistics compiled for the city of New York for the same year. Whatever the reason for the high incidence of diabetes among married women may be, "the point of public health interest is, that married women are not looking after their physical health with the same degree of care as their single sisters."

What is the nature of this disease, and how can it be recognized? Food has two distinct functions, one to supply energy and to keep the body warm, and the other to replace worn-out tissues and to serve in building the body. The foods that furnish energy and the driving force for the human machine are sugars, starches and all kinds of fats; indeed, for intense exertion, sugar is the best quick fuel. The building foods that enter into the intimate structure of the body are proteins, such as meats, fish and cheese.

The fat that is present in a considerable quantity in milk, cream, butter and nuts also forms a slowly available but concentrated source of energy. Besides these foods, mineral salts, vitamins and water aid in the building of the body.

In diabetes the sugars and starches and all kinds of fats, which are the chief source of energy and heat, refuse to burn, and poisonous substances accumulate in the body; acidosis may result, and in badly neglected persons coma may ensue. Fortunately, in the early stages the disease is mild, and it is only from prolonged neglect of treatment that serious complications follow. The reason that the body of a diabetic person does not burn the sugars and starches is that the pancreas, a small organ in the upper part of the abdomen, is deficient in its secretion. The pancreas has a twofold action in that it

produces two kinds of secretions; one passes through a tube or duct into the small intestine and the other is absorbed directly into the blood stream. The secretion absorbed by the blood stream is the hormone of the pancreas, which in Greek means the stimulator which enables the body to utilize and burn sugars. Its absence causes diabetes. This internal secretion is now called insulin because it is chiefly produced in certain islet cells of the pancreas. The actual cause for the deficient production of insulin by the pancreas, and hence the cause of diabetes, is not known. However, there are several contributory causes. Overweight has been observed in about 90 per cent of diabetic adults prior to the development of the disease. In these patients an overliberal diet causes overwork of the pancreas and probably leads to a deficient production of insulin.

Joslin made the statement that diabetes is largely a penalty of obesity and that the greater the obesity, the more liable is nature to enforce the penalty.

In Europe during the World War, the occurrence of diabetes was diminished in countries where the supply of food was lessened, and in this country with a decrease of luxuries during the war the death rate from diabetes decreased. From a public health point of view, it would appear logical to assume that a campaign of public education to combat overweight and to curb the habits of overindulgence in carbohydrates, such as sugars and candies, would go a long way toward reducing the incidence of diabetes. Obesity predisposes to diabetes, especially if some relative of the patient has also been afflicted with the disease; and the gradual reduction of overweight will lessen the likelihood of getting the disease.

It is probable that various infections, frequent grips and colds may injure the pancreas; and thus, after some years of wear and tear, symptoms of diabetes may develop. Therefore, infections should be guarded against and all sites of infection, especially of the teeth, should be eliminated to avoid injury to the pancreas. Inflammation of the gallbladder and gallstones may at times be a forerunner of diabetes.

There is some clinical evidence that some cases of diabetes have an emotional origin and that in a diabetic person the sugar content in the blood may be greatly modified by the emotions. The story of the man with diabetes who dealt in stocks on Wall Street is illustrative of this point. When the value of the stocks went up, the sugar went down; and when the stocks went down, the sugar went up. Worry and mental strain, therefore, should be avoided by the person who is predisposed to the disease.

How is diabetes recognized? Usually the person afflicted with diabetes complains of excessive thirst and of great loss of weight and strength. However, often the patient may not have any of these symptoms, and the disease may be discovered accidentally, perhaps when the patient undergoes an insurance examination; or the disease may manifest itself by a severe neuritis or frequent boils and carbuncles, although these are not limited to diabetes alone. Itching may be the first distressing symptom to direct attention to the disease. Pains and aches in the arms and legs are common in diabetes, and it is fortunate indeed that with the control of the disease these symptoms often disappear in a short time.

Tuberculosis and coma were dreaded complications in the preinsulin days. With modern, improved treatment the incidence and mortality of these complications have been reduced to a minimum. Tuberculosis is no longer a rapidly progressive complication, and it runs about the same course in a carefully treated diabetic patient as it does in a normal person.

The early recognition of the disease is important. Periodic health examinations have proved very useful in this respect. In view of the greater incidence of diabetes among married women, there is a great need of periodic health examinations of every married woman over the age of 45. Frequent examinations of a diabetic person, especially of the urine and of the blood, are essential for his continued well being.

Does the apparent finding of sugar in the urine always spell diabetes? No. There are certain drugs, such as acetphenetidin, cinchophen and the salicylates, which taken internally, will give a reaction that may be confused with that given by sugar. Many "patent medicines" are used in this country, and a great number of these contain drugs that are liable to react in a manner similar to sugar.

Persons in whom sugar is found should be carefully examined in order to make sure that they are not victims of diabetes. This is an important point. There are some persons whose kidneys permit the passage of the normal amount of sugar from the blood. This condition is not true diabetes, and in such persons, sugar may be found in the urine throughout their lives, and yet they may enjoy good health. In doubtful cases the blood should be tested for the amount of sugar. In true cases of diabetes the fasting blood sugar is abnormally high, above 120 mg. of sugar for every 100 cc. of blood.

Another test which will decide whether or not a doubtful case is true diabetes mellitus is the so-called sugar tolerance test. This test is harmless, and it will determine whether the person must diet the rest of his life or can disregard the diet.

Does every patient with diabetes require insulin? No. In about 90 per cent of persons with diabetes the symptoms clear up and the blood sugar becomes normal under dietary regulations alone. Of course, a diabetic person must cultivate self control and eat the exact amounts and the kinds of foods that are especially pre-

scribed for him. The diet need not be monotonous and may consist of a large variety of foods. Strict adherence to the diet will remove the overload from the pancreas and will bring about amelioration of the symptoms; in many cases it may be possible to increase the food without the use of insulin. This, of course, must be done under expert advice.

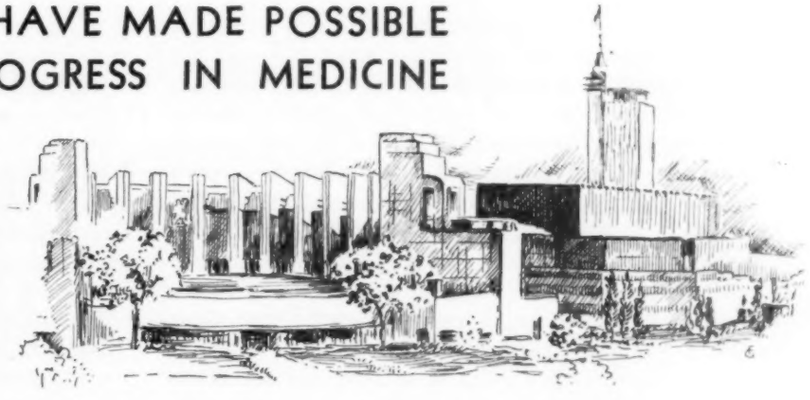
When is it necessary to use insulin? When a diabetic person cannot maintain a sugar-free state, be well nourished and be able to work, on a diet alone, then insulin must be used. Most children with diabetes require insulin. Diabetic persons in whom acute infections develop also require insulin.

Is it true that once insulin is given it must be taken the rest of the lifetime? No. In many instances after the use of insulin and proper diet the pancreas recovers sufficiently, the patient's tolerance for sugars is increased and insulin can be diminished or omitted entirely in the course of time. Insulin is not a habit-forming drug. It has been shown that insulin is destroyed by the juices of the stomach and the intestines. Therefore the various preparations of insulin are worthless when they are used by mouth. All substitutes for insulin are worthless. Indeed, they are not only ineffective in checking the disease, but they may prove injurious to the body. At the present time there is no substitute for a carefully planned diet and insulin injections when the latter are prescribed. A diabetic patient should be taught how to measure his food and how to substitute one article of food for another. He should also be trained to recognize dangerous complications, such as coma or insulin shock, so that he may know how to help himself until the services of a competent physician can be obtained. There is no other disease in which an intelligent understanding of the illness by the patient himself is of as much benefit as in diabetes. Indeed, it is an essential part of the treatment of the disease to teach the patient about his condition.

A diabetic person need not be hopeless; with proper care and intelligent cooperation he can maintain good health and be restored to society as a useful economic unit.

The June Issue Is Dedicated, in Appreciation,

TO THE MEN WHO HAVE MADE POSSIBLE A CENTURY OF PROGRESS IN MEDICINE



"Like a team of two horses slowly pulling a heavy load out of the mire, the family physician and the specialist are, side by side, slowly but surely liberating the human race from the depths of disease," writes *Dr. Herbert L. Herschensohn* in an appreciation and explanation of their work. "Their combined value cannot be measured in dollars and cents but rather in years of additional life. Together they constitute the greatest team on earth."

Having "run the gamut of tuberculosis (with two very unpleasant complications), pleurisy, a broken arm, a tonsillectomy, sinusitis, measles, mumps, a major internal operation, and all the minor ills that human flesh is heir to," *Sara Haardt,* well known writer, acknowledges a deep debt of gratitude and tells her opinion of the modern physicians who treated her "as an intelligent adult, not as a deranged unfortunate or as a little child seeking guidance through the wilderness."

In the workshop of Aesculapius, *Dr. Edgar F. Kiser* finds the many instruments of precision, the clinical thermometer, the stethoscope, the electrocardiograph and the x-ray machine, which are the physician's invaluable aids in making a diagnosis. These tools are responsible for many of the revolutionary changes in medicine and the elimination of much of the guesswork of the physician of the quite recent past.

Now with the summer vacation approaching, when the ear is especially prone to injury and infection, *Dr. Henry Dintenfass* issues a timely warning to safeguard the ears and prevent the usual ravages and toll of the swimming season.

The discovery and treatment of allergic manifestations are assuming an increasingly important place in medicine. "A hundred million guinea-pigs can't be wrong," declares *Dr. Elliott R. Weyer* in an article on idiosyncrasy. "Indeed, one guinea-pig can scarcely make a mistake, for what a specified aggregate of conditions will not do to one standard 250 gram animal, it will not do to another of the same weight. It is this sameness which makes them dependable. They are all alike. They have no individuality or idiosyncrasy. But human beings are different. Statistically, 90 per cent of all adults are susceptible to reactions of more or less moment when they are brought into contact with some reagent. The cause of the allergic reaction may be furs, feathers, flowers, newspaper ink, telephone transmitters or any one of a practically endless list of items."

In "The Doctor's Silly Ethics," *Dr. Park J. White* holds the mirror of truth up and shows how the layman frequently misinterprets the physician's motives. He explains why the doctor's ethics are in reality not silly, what the doctor has to contend with, and how he actually feels toward his patients.

Potions from the Earth

By
JAY G. SIGMUND

"I owe it to suffering humanity to share my labors with all."

IT WAS the third week of the Unalinna Indian Show's stay in the town of Ontarns.

Even three weeks was a long stay for this nomadic organization, which usually satisfied the needs of a neighborhood for Chief Unalinna's Magic Herb Tonic and other potions in a week or ten days; but in the territory around the little river town of Ontarns the ills of the flesh seemed more numerous, the faith of the populace in the ability of Chief Unalinna's disciples more staunch and the pocketbooks better filled than in most places. As a result, the medicine show had stayed three weeks, and still the tent was filled nightly with people of the village and the surrounding country; representatives from Bogtown up on the river road predominated.

Harvey Haines had a front seat tonight. Harvey had quit plowing corn in his river road field that afternoon at 4:30. That was an early hour for him to leave his work, but Harvey, unlike most of his neighbors, had no automobile; and when one must milk ten cows along with the other chores and then drive ten miles to be present when "Dr." Williard opened his lecture on "Chief Unalinna's Magic Potions, distilled from the plants and herbs that root in Old Mother Earth herself," one must leave the field earlier than usual or arrive after all the plank seats in the medicine show tent had been usurped by others.

The curtain had been drawn back and the gasoline torches on each side of the stage were flickering and shooting forth long tongues of flame among the clouds of dancing beetles and moths. On one side of the platform sat a decrepit Indian in full war regalia. He blinked stupidly under the fitful illumination and occasionally brushed the sweat from his bronzed face with a smudgy hand. Opposite him, wrapped in a green blanket, hunched a wrinkled and very moist Indian woman. These two had long been associates of Williard. Ever since this verbose person had given over the vending of electric belts, had substituted liquid panaceas for the mechanical contrivances, and had secured the services of these two cast-off followers of a wild west show, he had prospered greatly.

Williard now appeared on the platform. There was a slight stir in the audience and a meager show of applause. Bill Hakes from Arp's Ridge way swayed unsteadily on his plank seat, stuck both little fingers in his mouth and attempted to whistle, but the feat was not very successful and nobody laughed except Bill, who chuckled drunkenly.

Williard glared toward the corner of the tent from which Bill's disjointed whistle came, as he stuck one of his pudgy hands in the breast of his Indian beadwork coat. He then tossed his great mane of grayish hair and, bowing to his audience, began the fifteenth of his lectures on "Health and How to Get It from Potions of the Earth."

His audience listened breathlessly. The only sounds that could be heard above the lilting cadences of the Doctor's voice were the spluttering of the gasoline torches and the occasional buzz of a huge June-bug which had flown in too close proximity to the dancing flames.

"My friends," boomed Williard, "you have all known what it means to have the blood thinned and polluted by excessive drinking of water during the summer season. All of you know that when a man is working day after day in a field beneath a boiling sun and drinking gallons and gallons of water, it's harmful. There's two seasons of the year when people abuse their

health: the winter when they eat too much heavy food like buckwheat pancakes and sausage and the summer when they drink too much cold water. That's why people have boils and eruptions in the spring and that's why they lose weight in summer. A person must rebuild the nerve tissue and purify the blood in the spring and in the fall, and the only way to do that is to replace the natural elements of Old Mother Earth herself that have been taken out of the body, by putting back in again these same precious elements which can only be done by taking some good tonic like Chief Unalinna's Magic Herb Compound."

The voice droned on and on. The virtues of the panacea were elaborated on, and the two Indians sat stolidly by, sweating. Some of the members of the audience nodded sleepily, but most of them listened with a great show of interest. It might be a long time before another medicine show came to Ontarns, and one must have something to talk about through the long winter months which spread ahead!

Suddenly the Doctor assumed an extremely confidential manner. It was evident that he was going to conclude his lecture, but it was also evident that he had something of importance to reveal. He tossed his great mass of gray hair. His hands went again into the capacious pockets of his resplendent beadwork coat.

"My friends," he said, "I now come to a part of my talk that fills me with emotion. I have never been among a people who have won my love and esteem as have the people of Ontarns. But all good things must come to an end. I have many calls from other towns, and I owe it to suffering humanity to share my labors with all. I regret exceedingly that this must be our last night in your little city. Tomorrow we leave you to take up a stand in George Rapids. There is much need for us there. Quackery among the resident doctors there has literally filled the veins of the people with poison. They need the healing which our remedies can give. We must go to them. But before we go we will make arrangements to leave the agency for our remedies in your midst. Just who will be the fortunate person to obtain this agency I am not sure, but it must be a person of standing and unquestioned integrity. He must also have a small amount of capital. I shall be glad to talk with you about it. Any one who is interested can see me after the show. The Indians will now do a tribal dance for you."

The two Indians arose sluggishly, and one of them began to beat on an old tambourine while they both went through shuffling steps.

Every one seemed interested; that is, every one but Harvey Haines. Harvey straightened his stiff, weary back and pulled at his scraggly mustache, and a new light came into his eyes. He had been extremely attentive until now, but the closing words of Williard's lecture had fallen on fertile ground when they fell on Harvey's ears. That very afternoon the banker at Ontarns had told Harvey that the mortgage on the 40 acres of scarred hill land, which the gaunt bachelor had inherited from his father and on which he had lived since his parents had died, could not be renewed again since the bank was now controlled by the state. Harvey had been expecting it. He had listened to the banker's threats for four years, and he had not been surprised when the banker had driven into the field that day and given him formal notice.

Of course, Harvey had wondered vaguely what he might be able to do to earn a living, but in his slow way he had partly reasoned, partly sensed that somehow a way would show up. He had thought of working as a hired man, of cutting cord-wood and even of going to the poor-farm as many of his kind eventually did. Somehow it did not matter much. Working as a hired man was uncertain, and bosses were liable to be hard. Cutting cord-wood was a

limited proposition, and as for the poor-farm, well, that wouldn't be bad, he thought, but one could not always get in. People who could work were supposed to work and not go to the poor-farm and "live off the taxpayers."

Now, however, Harvey was aroused with a great new hope which gripped him more than had anything else for a long time. Night after night he had been to the medicine show, and he had watched the people handing up paper dollars in exchange for the bottles of Chief Unallina's Magic Herb distributed by the two Indians as they walked through the crowd. Harvey had been bewildered. Seldom had he seen so much money displayed at one time as he had seen on these nights. He thought of Williard as a veritable Croesus.

And now the way spread out for him to enter into the same golden fields. Surely those who had been buying bottles of this potent remedy would continue to buy it, reasoned Harvey. Once they had been healed by its magic, certainly they would tell their friends! Harvey saw himself no longer on the poor acres where he plowed much and harvested little. He was in a room in a business block in town with shelves loaded with bottles of Magic Herb and old friends and neighbors crowding into the front door with paper dollars in their eager hands.

The Indians were leaving the stage. Harvey heard Williard say in a voice that sounded far off:

"Now don't forget, friends, if any one here is interested in having the agency for our remedies in this neighborhood, they can see me right after the show. We bid you good-night and good-by."

The audience was leaving. Bill Hakes woke from his drunken sleep at a blow on the shoulder from some one, rose to his feet unsteadily and followed the crowd. A baby began to cry, and the hum of conversation and the sallies of the hill people as they called to one another mounted to a height and then gradually faded into the darkness as the audience left.

Harvey had expected quite a few people to linger and talk with the Doctor about the agency of his remedies; but to his surprise no one remained but himself.

Awkwardly Harvey approached the Doctor, who stood near the platform and seemed indifferent to his presence.

"What can I do for you?" asked Williard brusquely, his hands in the pockets of his beadwork coat.

"I might be interested in the agency," said Harvey after an awkward pause.

"Well," replied the Doctor, still with little show of interest, "all there is to it, you pay 50 cents a bottle for your stock of Magic Herb. Then you sell it to them that wants it for a dollar a bottle."

Harvey was somehow disappointed. He could hardly realize that such a humanitarian thing as healing the ills of mankind with such a seemingly infallible potion as Magic Herb could be reduced to such a simple and apparently cold-blooded proposition as this. He wavered and dug into the foot-worn turf with the toe of his coarse shoe.

The Doctor unbuttoned his great beaded coat and mopped his face with a soiled handkerchief. Harvey fancied that there was an odor of liquor in the hot night air, but he could not be certain from where it came. Not knowing what to say next, he stood twisting his old hat. He had expected the Doctor to tell him eloquently of the virtues of Magic Herb and then proceed to tell him more of the fortune to be made in selling the medicine. Apparently Williard's mind was far away from the business at hand, for his attention was fastened on the Indian man who was laboriously pulling at a tent rope.

Suddenly the Doctor wheeled around to Harvey:

"Well, what do you say?" he asked impatiently. "Do you want the agency or not? I'm ready to leave here right away, and I'm not in the habit of coaxing people to get in on as good a thing as this is."

Harvey gulped. "Twenty bottles would take $10 to handle, wouldn't it?"

"Yes, and cash, too," answered the Doctor.

"When I get them sold where do I get more?"

Williard fished in the pocket of his beaded coat and produced a dirty card.

"Here's my factory address. I can supply any amount at any time."

Harvey hesitated. The figure represented exactly the sum total of his wealth: $10, earned by cutting white oak fence posts all through the long winter; $10, earned by sweat and muscle-sting; $10, which a few days before he might have considered as belonging to the banker. But now that the banker had decided to foreclose on his farm, he felt it was rightly his own. It had been paid to him a few days before by the neighbor for whom he had made the fence posts, and he had not had an opportunity to go to town since he had received it. Now it must be the means of inducting him into a new manner of earning bread.

Harvey stared at the card and then at the Doctor. The Doctor scowled and walked away a few paces to give some instructions to the Indian who was trying to dislodge a tent stake.

Harvey felt in his trousers pocket, and his touch told him that the wadded $10 bill was still there. Slowly his sluggish mind revolved the transaction. He could see the florid face of the Ontarns banker before him in his mind. The farm—it was gone! The medicine—people had been taking it and paying for it! Each bottle offered him a net profit of 50 cents. The twenty bottles would give him back his $10 and

$10 besides. Ten dollars would keep him a long time if he ate beans and corn bread and seldom wore any other clothes besides blue overalls and coarse work shirts.

He twisted the moist bill in his pocket into even more of a wad.

"Well?" suddenly ejaculated the Doctor with a withering glance and a gesture that indicated he would soon consider the whole matter closed.

"I'll take twenty bottles," feebly replied Harvey as he reached out his hand which contained the crumpled money.

The Doctor grasped the bill, spread it out on his moist palm and then shoved it into his trousers pocket. He beckoned to the Indian.

"Get this man a twenty bottle carton," he ordered. The Indian disappeared for a moment and returned with a huge package which he handed to Harvey. The two men began demolishing the plank seats and did not pay any further attention to their customer.

Harvey walked away with his package in his arms. It was heavy, and the tent was hot. Once outside he found himself in near darkness, and he thought he heard whisperings coming from among the oaks that surrounded the tent. Yes, undoubtedly some one was there in the shadows!

Harvey slowly edged his way behind a clump of alders. His eyes were now accustomed to the darkness, and he could plainly discern two men stealthily moving toward the opening of the tent. Harvey carefully set his carton of bottles on the ground. Evidently the two men had not seen him come out in the shadows, or if they had, they did not care.

Curiosity compelled Harvey to watch the skulking figures. They stood quietly at the entrance of the tent for a long time. Then they whispered with their heads close together.

All at once they tore a square of canvas from the side of the tent, and a flood of light enveloped them. There was the steel glint of bright revolvers in each man's right hand. They rushed into the tent. Fascinated, yet thoroughly frightened, Harvey moved to another clump of alders which was close against the canvas. A small hole in the side of the tent gave him a place through which to peer. The two men rushed through the tent to the spot where Williard was crouched over a plank. He was assisting the Indian in taking down the seat. A look of astonishment crossed the Doctor's face as the men seized him on either side and revealed with a swift gesture the great silver stars on their vests.

"We got you this time, Doc," shouted one of the men as they brought the Doctor to his feet. His beadwork coat was twisted comically, and his great mop of hair streamed in disorder in all directions.

"Where's the stuff?" shouted one of the men.

"It's there," puffed the Doctor, "but you can't touch it. It's medicine."

"Oh, can that noise! That's what you said when we got you in Manchester," said one of the men. "You can't doctor up bad alcohol with a little dandelion root and peddle it to people and get away with it. Come along now. We'll give you a ride. No funny buiness either or we'll try our new gats on you. Bill," to the other man, "you get a few bottles of his swill for evidence."

Harvey, dull witted though he was, needed to hear no more. Wheeling about, he ran through the timber lot and took a long circuitous route to the hardware store where his horse drowsed at a hitching post. His hands were palsied as he untied the bony animal, and the beast broke into a run as he flayed it with his whip when he was in the seat.

The dogs at farmhouses along the river trail barked as his buggy wheels ground out a gritty sound from the clods and gravel of the road bed. A cock, wakened by something, crowed on its roost. Somehow it seemed to Harvey that it had been a long time since he had driven down that road on his way to Ontarns and the medicine show.

The outlines of the white picket fence that surrounded his house came into view through the faint moonlight. His spotted hound woke from his drowsing under the maples and came limping out to meet him. He threw the harness lines on the ground.

"I must get me a rifle for the fall coon hunting," he thought to himself. Then he remembered the Ontarns banker and the money that he had earned with his post cutting—the money that he had forfeited.

There was a heaviness in the night that seemed suddenly to have gone into Harvey's body and made him old and worn like the land beneath his feet.

A Course in Practical Motherhood

By MARY JACOBS

IT LOOKS like football practice in front of the bulletin board at the Dalton School in New York City. Girls are crowding and jumping and shouting excitedly. They are trying to scan the list of those on duty for the next month as cadet mothers in the Dalton School Day Nursery, where four lucky babies are being reared scientifically by the high school students, under the direction of several leading pediatricians, a psychologist and a trained nurse.

"I'm having charge of Baby Paulina's feedings next week," jubilantly announces 15 year old June.

"And I'm to bathe Freddie," says 14 year old Helen.

"I told Miss Parkhurst we ought to keep our babies on Saturdays, too, as we did last year," says a disappointed young miss whose name does not appear on the month's schedule. "They're lots more fun than going to a matinee."

The 100 girls who attend the high school of the Dalton Schools, Inc., evidently agree with her. Since the day nursery opened in January, 1932, the course in practical motherhood, the first of its kind given in a high school, has been the most popular on the entire curriculum. These girls are allowed to play mother to four infants, to love and pet and care for live babies. Each girl is assigned special duties, such as the feeding or bathing or dressing of an infant, for a month; then she spends several days each term assuming full charge of a baby, from the time he arrives, at about 7:30 a. m., until he leaves for home at 5:30 p. m.

During the four-year course, each girl will have the opportunity of familiarizing herself at first hand with all the activities she will some day be required to carry out with her own babies.

"Since a vast majority of our girls marry and most of them have children, it seems to me," Miss Parkhurst, the gracious and charming principal who established this nursery course, explained to me, "that instilling in them the proper attitude toward youngsters and practical training in child care are more important to the girls than almost anything else. How many young mothers do you know who are prepared for motherhood? Many, many of them quake when they are first confronted with the responsibility of handling and feeding their first-born. Do you remember how scared you were when you picked up a tiny baby for the first time?

International News Photos, Inc.

The latest scientific methods are used, for styles, even in diapering babies, change.

"Hundreds of young mothers have confessed to me that bathing their infants was a frightful ordeal. That is just plain ignorance, which a little scientific teaching would cure. I felt that it was up to the high schools to tackle the problem and prepare the girls for the career of motherhood, the finest that they could achieve.

"Last year we began our practical work. We advertised for four babies a month old or a little older; it is not feasible to take children away from their homes before that age. We didn't want to start a charitable nursery or to experiment on the infants. We merely were trying to educate our girls in child

care to give them a worthwhile preparation for their future lives. The infants were to be reared scientifically, under the supervision of well known pediatricians and nurses. They had to be perfect physical specimens from good families, and we felt it would be fairest to take children whose mothers were employed during the day."

From the applicants they finally selected Paulina, a German baby, aged 4 months; Norma, an Irish baby, 2 months old; Frederick, of Irish-American stock, aged 6 months; and Frank, a Hungarian baby, 2½ months old. They purposely chose children from varied racial groups and environments so that the girls could trace the effects of heredity and environment. The infants were assigned to the senior, junior, sophomore and freshmen groups in the order given.

The children are kept at the nursery until they are about 2 years old, so that during her high school course each student has the opportunity of studying the development of two normal youngsters from early infancy to childhood, the period which modern psychologists feel is the most important in the child's life.

The girls work in groups. Here is a typical schedule:

7:15-8:45 a. m.—Girls call for, receive, bathe and dress babies.

9:30-10:30 a. m.—Other girls prepare formulas and feed infants.

11:30 a. m.-1 p. m.—Other groups relieve the nurse.

1:45-2:30 p. m.—Another feeding is given.

3-5:30 p. m.—Another series of bottles is prepared; girls tidy up nursery, prepare extra bottles and dress infants for going home.

The groups shift their duties from week to week so that the girls may familiarize themselves with all phases of child care. After they have had the separate duties, the girls are given the entire responsibility of caring for one infant for a few days at a time under the direction of a trained nurse who is always present.

A course of eight lectures, covering the various stages of a child's life from prenatal care and birth through the second year, is open to all the high school girls. This course is given by the four pediatricians and the psychologist who make up the curricular committee; it includes theoretical lectures with moving picture slides which show the growth and development of infants, their physical care, their mental and emotional life, nutrition and diet, prevention of disease and the common disorders of childhood.

The chief pediatrician gives practical laboratory work to the girls, showing them how to handle a baby, diaper him, hold him while he is being fed, weigh and measure him, and care for him when he shows signs of illness.

These instructions are carried out by the girls themselves in their assigned duties. They actually bathe the babies, prepare their formulas,

Under the supervision of a nurse, a cadet mother bathes the baby.

wash the diapers, dress the children and tidy up the nursery. All is done in the latest scientific manner, for styles, even in diapering babies, change.

The large airy nursery is situated on the top floor of the school building and faces the south and east. It is therefore continually flooded with sunshine. A "no visitors" sign hangs on the door; once inside, you must quickly don a spotless, stiffly starched white smock, with a cap to match, for the babies are protected in every way possible from contamination by germs from the outside. You are then permitted to enter the sanctum sanctorum, where four adorable babies coo and kick contentedly in their cribs. The predominating color is cool, apple green. There are four green play pens, four little dressers and four baby chairs of the same shade. There are, in fact, four of everything—four sets of blocks, four sets of trains—four of almost anything a baby would want.

"Only the most modern and sanitary equipment is used. The babies are bathed with a spray, over a netting, and are handled as little as is compatible with their needs. They are given a chance to develop freely without the constant fussing and fuming to which most inexperienced mothers are wont to subject their children.

"At first the girls tried to play with them all the time, but we soon proved to them that the infants were much happier and calmer with less petting, and the cadet mothers soon realized their responsibility to the babies. They take

them up only when necessary and reserve the petting for play periods," continued Miss Parkhurst.

And how proud the girls are of their charges! When Norma's first tooth appeared or the first hesitating step was taken by Freddie, or when the first coo of "Mamma" was heard, what jubilation! How the fond, doting young "mothers" broadcast the news!

"I remember one girl who was as nervous as a mother with her first-born," Miss Parkhurst added, smiling reminiscently. "When first she tried to feed Frankie, he refused his bottle. She was frightfully upset and assured the other girls she was through with motherhood. But after a few days, when she and the mite were on friendly terms, babies were ace high on her list of desirables for the future.

"Often the care of our babies has far-reaching effects on the girls' parents. Many of them drop in to inquire about the health of their temporary 'grandchildren' and seem almost as interested as the girls themselves. Strange to say, the fathers are particularly interested; they were, from the first, staunch advocates of baby raising as a part of the regular curriculum. Many of the mothers felt at the beginning that their daughters would learn by instinct how to care for their children properly when the time came. Now they all agree that the course is excellent.

"Instinct is all very well in its place, but you can't learn the proper formula for a young baby by instinct; nor can you depend on intuition for preparing spinach and beef juice for him. And if you obeyed your maternal instincts, you'd pet and spoil the baby almost to death. Why, this term our chef, who is so competent in preparing school food, brought his infant son to us. The infant was suffering from improper diet and care. Under the supervision of the pediatricians and the nurse, our girls took him in hand, and today he's just as healthy and happy as our other babies."

There is also a regular nursery school for children of prekindergarten age in the building. Here the cadet mothers come for two hours a week to observe the children as they play with their toys, to study the toys that are most suitable for the development of the child and to watch the child's reaction to them. If only fond relatives and friends were more enlightened as to the appropriate toys for the various stages of the child's growth, what an advance would be made in the manufacture and selection of toys, and what a step forward that would be in the education of children! The nursery school is trying to do its bit to help.

"In fact," Miss Parkhurst told me, "it was this nursery school which was largely responsible for the course in motherhood. The high school girls used to visit the tots and often upset our plans by fondling and petting the children. If 3 year old Anna was laboriously buttoning her coat, or 4 year old Peter struggling with his sweater, one of the girls would gushingly rush to the rescue, at the same time administering a hug and a kiss to the self satisfied youngster. They interfered so much that they made a nuisance of themselves while they were trying to help. Through our course, their point of view has changed; they realize now that though it takes much more time and patience to let the child help himself, that is the best plan for his development."

Miss Parkhurst feels that it is even more important to train the mother than it is to train the child. If you reach the mother, the child will inevitably receive the benefits. The cadet mothers are instructed to let the children develop naturally and to teach them to help themselves at an early age.

"We are going further than the mere instruction in caring for infants. We are helping to instil in the high school girl an understanding of and a love for the baby and his development through childhood. This may seem unnecessary, yet largely because of modern systems of education it must be done," explained Miss Parkhurst.

"The little girl plays with her dolls and pets her make-believe babies until she is about 10. Then, because of the narrowing of her intellectual interests and the emphasis on school work and her outdoor play with her friends, her attitude toward her dolls, and subsconsciously the babies they represent, undergoes a change. She begins to regard playing with dolls as babyish; she becomes less and less interested in real infants. Some of our senior high school girls, at first, were actually ashamed of their job of dressing little Norma and Freddie."

For the next ten or twelve years, through grammar school, high school and college, or as they enter on their various careers, girls think less and less of children. The maternal instinct breaks down at the very time it should increase. Many do not marry; or if they do, they are childless. If they have children, they are so fearful of their responsibilities and often have so many erroneous ideas to correct that both baby and mother suffer.

Rarely do they realize that parenthood is the most satisfying and broadening profession for women and that no career will compensate for the loss of this normal function. Mary and Sue, brought up while the feminist movement with its insistence on equal rights for men and women flourished, are taught to regard a career in the business or professional world as their just due; marriage and motherhood, by inference, become so much interference. They lose sight of the fundamental facts of life. Courses in practical training for motherhood, such as the one being given at the Dalton School, will do more to create the proper attitude in girls than any amount of theoretical teaching.

Orthopedic Play Garments

By
MARGUERITE HOPKINS
and
FANNIE POTGIETER

It fits all sizes and shapes.

It hides disfiguring casts.

It gives a maximum exposure to sunlight.

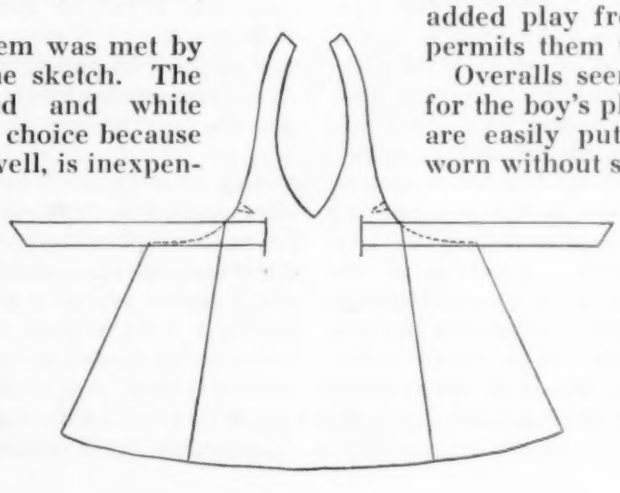
THE CHILDREN of one of the convalescent homes affiliated with the Chicago University Medical School needed to play in spite of their physical handicaps. Even more than they needed play, they needed the healing, health-giving rays of the sun. A play garment had to be designed that would fit over their pitiful collections of braces and casts of all sizes and shapes. At the same time the garment had to give bodies a maximum exposure to sunlight. Like all hospital garments, it had to fit a succession of patients of varying proportions. This meant that it needed to be adjustable in both length and width. Freedom of movement for the convalescent child was, of course, another requirement.

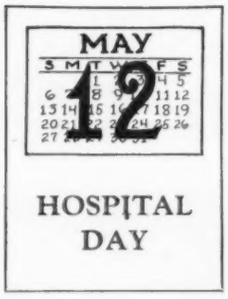
For the girls the problem was met by the garment shown in the sketch. The material used was red and white checked gingham, a good choice because it launders easily, wears well, is inexpensive and is cheerful in color.

The diagram shows the garment flattened out before the center back seam is stitched. Three sizes of garments—small, medium and large—were made to take care of the usual range of differences in height. Individual differences within these groups were taken care of by adjusting the straps. The upper straps tie at the back of the neck. The ties at the waist are stitched into a dart on each side of the center front and then slip through straps at the back to hold the skirt in place. An extra strap across the upper part of the back is sometimes necessary for very thin children.

The edges were all bound with red bias tape, making the construction of the garment very simple. Two yards of gingham and a package of tape were required for a medium sized garment; the total cost was 25 cents. Small matching bloomers or shorts are desirable for added play freedom, if the child's cast permits them to be worn.

Overalls seemed the simplest solution for the boy's play garments because they are easily put on and, when they are worn without shirts, they are "sun-back." It is often necessary to rip seams to provide extra freedom; in such cases zippers may, if desired, be used to close them. A triangular, flared section set in the opened seam of trouser legs gives the needed extra room.





Varieties of Hospital Service

By E. M. BLUESTONE

THE IMPORTANCE of the hospital in the social life of the community has come to be recognized more and more during the last decade, but not every hospital is entitled to be called modern. That term should be reserved for those hospitals which meet certain standard requirements imposed by a group of national medical associations of which the American Medical Association and the American College of Surgeons are the leading members. With the increased interest in hospital service, a system of rating has been developed and introduced in order that the public may know which hospitals meet the exacting requirements of this scientific age.

Most persons who are sick are not treated in hospitals. This large group is cared for at home; the patients make their own arrangements with physicians or have these arrangements made for them under philanthropic auspices.

Hospitals may be classified under two general headings. First, there is the public hospital which is supported entirely by the municipality, by the state or by the federal government. Thirty-four per cent of all hospital beds in New York City are in hospitals of this variety. These are the so-called "city" hospitals, municipal hospitals, state hospitals, hospitals of the U. S. Public Health Service, the U. S. Veterans Bureau hospitals, and army and navy hospitals. With the awakening of public opinion, the contributions of these institutions to public health progress is increasing, and a number of them are indeed in the front rank of hospitals. According to the beliefs of many physicians and of persons in the various professions engaged in social service, the municipal hospital represents, broadly speaking, the ideal way for the city to care for all the indigent sick. The supporters of this theory argue that it is in the interest of a community to keep the population well, and that funds should therefore be provided by a system of taxation to be used for hospitals in much the same way as in the case of public schools which are maintained for educational purposes.

Out of the shortcomings of this type of hospital there arose a second great group which is now acknowledged to be the leader in scientific thought and activity. These institutions are supported by voluntary contributions and are referred to by the English as voluntary hospitals; in America, however, they are better known as private hospitals. These institutions sprang from a variety of motives. In some instances the motive was purely scientific, as in the case of the various research hospitals, of which the Rockefeller Institute in New York may be taken as an example. Often the motive was religious, as in the case of the many Catholic hospitals throughout the United States. Some arose from fraternal motives, examples of which may be cited in the Masonic hospitals, and finally some were established from purely philanthropic motives, as in the case of the ordinary nonsectarian hospitals which depend wholly on private benefactions for their existence.

In either type of hospital, but particularly in the voluntary type, the final governing body is composed of a board of directors or trustees with executive, legislative and judicial powers. This board is, as a rule, composed entirely of laymen with strong social impulses. Another important body in a hospital is the medical board which, as a rule, is composed of the senior members of the various medical, surgical, laboratory and special consulting staffs and

The modern hospital is a complex organism in which the efficiency of the whole is dependent on the efficiency of each part.

which acts in most cases as an advisory body to the administration and to the board of trustees in all matters pertaining to medical construction, equipment, organization and administration.

The responsibility of the administration is twofold. There is the clinical or medical responsibility, which concerns the visiting doctor and the resident or house doctor, the dentist, the pharmacist, the nurse, the occupational therapist, the physical therapist, the dietitian, the social worker, the laboratory worker and last, but by no means least, the patient and his family. Then there is the business responsibility which concerns all other employees who are classified as "lay" employees; this deals with engineering, housekeeping, auditing and purchasing problems. The average hospital gives the impression of a hotel, except that its guests are sick and are classified in accordance with certain well defined social and medical standards.

Almost all large hospitals today are divided into two parts: the inpatient department for patients who must occupy beds during the greater period of their illness and the outpatient department, variously called the dispensary, polyclinic or ambulatorium, where walking patients are treated before and after their stay in the hospital, or where the condition from which they are suffering is such as to require only daily visits to the hospital. A few hospitals, and these are becoming increasingly more rare, have no outpatient department, while a few dispensaries in the larger cities are of the so-called unattached variety and have no direct affiliation with any hospital. Modern hospital organization regards one as complementary to the other and the two as inseparable.

Hospital administration is only one of the problems of the governing board. There are problems in hospital construction, which in a progressive hospital must be faced constantly. In the first place, the institution must be located and built to meet definite community needs which exist at the time, and constant adjustments must be made in order to meet changes in these conditions. The hospital plant must be maintained so that it will give a maximum of service to the sick. There are also important problems in equipment, fixed or movable, scientific or household. And there are problems in organization which concern all the hospital workers, professional and nonprofessional, in their relation to hospital service. The demands for hospital facilities of various kinds must be met, and the relation of the supply to this demand must be studied with a view to making the necessary adjustments. The various hospital activities must be organized, and changed when necessary, with an eye to efficiency, which means maximum comfort to the patients and the elimination of waste. Finally, the problem of the administration of all these activities must be considered. Service to the patient is and should be the criterion of administrative judgment, and the executive must ever be on the alert for necessary improvements in construction, equipment, organization and administration to meet the inexorable law of change which governs all progress.

In the outpatient department, walking patients are treated before and after their stay in the hospital.

The governing board is represented in the conduct of hospital business by an executive who is usually known as the director, superintendent, manager or administrator. As a rule, the executive lives on the hospital premises, and his activities cover a wide field since he must deal with almost every conceivable problem in government, business and medicine. The executive acts in the larger hospitals in cooperation with heads of departments. Thus, there are the heads of the social service department, the nursing department, the dietetic department, the outpatient department and the private section; there are also the heads of the pharmacy department, the accounting department, the engineering department, the housekeeping department and the purchasing department. The larger the hospital, the greater the degree of administrative specialization. All representatives of departments are experts in their chosen fields and render valuable service in the efforts of the executive to coordinate the activities of the hospital.

This division of labor is also evident in the medical departments. Thus, there are the directors or chiefs of the medical service and the surgical service as well as the various heads of special departments, such as the nose and throat department. There are also directors or chiefs of the various laboratory departments, such as the department of radiology, with subchiefs for radiography (diagnosis) and radiotherapy (treatment), and the director of the main laboratory, with subchiefs for biochemistry, pathology, bacteriology and serology. The larger the hospital, the greater the differentiation of activities.

Hospitals are classified further in accordance with the social status of their patients. There are hospitals and sanatoriums which are administered for profit only and which admit only patients who can pay more than the cost of their upkeep. The most important classification of hospitals, however, is medical; this divides them into general hospitals and special hospitals. General hospitals as a rule accept both paying and free patients and treat all forms of disease, with the usual exception of contagious diseases, mental diseases, chronic diseases and often maternity cases. General hospitals care for acute, short term cases only. They contribute 60 per cent of the hospital facilities in New York City.

The special hospital is built for the treatment of special cases only. In this classification are found the eye and ear infirmaries, the women's hospitals, hospitals for the treatment of contagious diseases, maternity hospitals, neurologic institutes and hospitals for chronic diseases.

Another classification of hospitals which is of interest depends on whether or not the hospital is directly associated with a university in the teaching of medicine. Thus, there is the university hospital, of which the Johns Hopkins Hospital in Baltimore is an example, and the nonuniversity hospital, of which any of the general hospitals may be taken as an example.

The major activities of a hospital and of its staff may be summed up under the headings of preventive medicine, diagnosis, therapy, teaching and research.

The most important development in the study of the public health problem is the emphasis that is now being placed on the possibilities of disease prevention. This is one of the functions of the hospital and health center.

The next great activity is diagnosis, or the identification and recognition of disease processes. This function is shared by two groups. The physician, surgeon or specialist studies the history of the signs and symptoms in a given case and calls in the pathologist, radiologist and other laboratory workers to help him in the classification and medical identification of his patient.

A third activity, which in the mind of the layman is the greatest, is the therapeutic function. This refers to the cure of disease conditions, an activity which rests mostly with the medical man, assisted by others such as the nurse and

social worker. Social economic factors play a large part in the course of disease processes. The doctor speaks of "organic" diseases in referring to diseases of the body and of "functional" or other diseases of the mind. One really does not exist without the other, and the woes that affect the mind of the patient must be remembered when the general problem of disease is considered. It should be constantly borne in mind that all medical activities are interrelated and that no physician can afford to pay attention to one part of the body only, without considering the individual as a whole.

The fourth activity of a hospital is the teaching activity. A hospital teaches its visiting staff of doctors through the constant association between these doctors and their patients. It is, however, concerned more directly with the teaching of the resident or house doctors, sometimes called interns. This group is composed of recent graduates from medical schools who continue their practical education at the hospital. The hospital must also teach the practitioners who see most of the sick in the community. Most general hospitals have well organized schools for nursing and some for dietetics, in association with their wards. Still another teaching function concerns the relationship between the hospital and the public in its vicinity. The layman is often treated to a distorted view of scientific facts through the commercial activities of a motley collection of quacks. It is the function of the hospital and related scientific organizations, which are in possession of the true facts, to carry on the teaching.

Another important activity of the modern hospital is the problem of research. There is clinical, or bedside, research and there is laboratory research. Every case of sickness deserves careful study, no matter how much has already been learned about it in the past. A series of facts must be recorded continuously in order that definite scientific inferences may be drawn from them. The purpose of all this study is to provide the physician with a set of accurate data which will enable him to be of greater benefit to the next sufferer in line. Laboratory research, as an aid to clinical research, includes studies that are made in the so-called fundamental sciences of medicine, such as pathology, bacteriology, serology, physics, chemistry and the various biologic sciences. The history of the science of medicine has a number of brilliant pages to its credit, pages which would never have been written had it not been for the investigative mind of the research worker. The postmortem room, where accuracy must obviously prevail, is an obligation which the community owes to the sick.

How is the hospital of the voluntary, or private, type financed? Ideally, a hospital which is so closely associated with humanitarian purposes should be so well endowed with funds that the interest on its invested capital would suffice to carry on its varied activities. The large voluntary hospitals of this country have annual budgets which reach as much as $1,000,000 or more; naturally, a large amount of capital is required to insure such an income. Since the millennium has not yet arrived, however, such hospitals must be content with part and depend on the endowment of individual activities either for a short period or in perpetuity. One can endow a bed, a room, a ward, a building, a clinical department, a laboratory department or a fellowship for research work, or one can simply add to the general endowment fund for the everyday uses of the hospital. Few hospitals have extensive endowment funds, and most of them live from hand to mouth and manage to pile up, as Dr. Goldwater says, "an annual deficit which is often the symbol of a noble ambition." Occasionally donations are made to establish, but not to maintain, certain activities. One can see how in a case of this sort the hospital is hard pressed to provide the additional funds with which to carry on such activities.

The income for the typical voluntary hospital is usually derived from a community chest or from an organization, such as the United Hospital Fund in New York, which distributes money annually on the basis of free treatment given by its constituent hospitals. Income may also come from private patients, part-paying ward patients and dispensary patients. This income depends largely on the extent of the private facilities of the hospital and on the popularity of its private section. The municipality usually subsidizes the hospital for the care of public charges. In New York City, hospitals are paid about half of the cost of the upkeep of the patient, provided the case is urgent and the patient lives within the hospital district and is too sick to apply to a city hospital for treatment. Income also accrues from legacies and from general and specific endowment funds provided by the benefactions of philanthropists.

A hospital, regardless of its classification, must maintain a place on the firing line of medical progress, and under these circumstances its problems are many. The medical organization of any modern hospital must contribute its share of scientific work to medical and public health literature. The organization must do its best to prevent sickness whenever possible, to recognize sickness as early and as accurately as possible, to relieve sickness as rapidly and efficiently as possible, to teach better methods to others and to develop new methods which will help the medical profession and the public to improve those now in use. And, most important, it must carry on all these activities with the interests of the sick constantly uppermost in mind.

Myron Couldn't See

More Truth Than Fable

By

W. W. BAUER

LITTLE MYRON had always had Trouble with his Eyes ever since he began to Use them in School. Myron's Father was one of those great Big he-men with as much Pep as a Six with Floating power, and he didn't have much Sympathy for anybody that wasn't Husky. He said Myron was a Sissy, and he rubbed it in by telling how when he was a Kid the boys didn't Push him Around, not Much. He could Sock a baseball farther and Faster than anybody anywhere near his Age, and he was no Slouch when it came to Football. And Fight? Say, he was the Big Bad Wolf in person, to hear him Talk. Yes, sir. Any Boy of his that Moped around in Corners and Read books, instead of going out on the Diamond and Pasting that ol' Apple, or Mopping up the Gridiron with the rest of the Gang, why, he just had a Low opinion of a kid like that, that's All.

Poor little Myron did the Best he could. He went out on the Diamond in the Spring and tried to get a Home Run so his Dad would be proud of him, but every Baseball player knows that you can't Hit 'em if you can't See 'em. He tried Football too; but the team wouldn't have him because he Muffed the punts. After a couple of Seasons, Myron gave it up and Kept out of sight as Much as he could, and didn't Talk about sports at all, and Wished he could make his Dad proud of Him. He got into a Fight once, but he had to Take a licking, and so he never Mentioned that to his Dad.

It wouldn't have been so Bad if his Mother had had more Time for him. Myron's Mother was a Grand mother, at the meeting of the Woman's club. All the Ladies said she read the most Marvelous papers on Mental Health in Childhood, and she was the Best they had ever had for Chairman of the Underprivileged Child Committee. She was on the Board of the Orphan's Home, too, and took So much interest in the Poor little motherless and fatherless Childen. She was elected a Delegate to the State meeting, and from there she got an Appointment on the National Conference to Interpret the Responsibilities of Parents, where she made a Speech that was printed in Lots of papers. The Club was proud of the National recognition she brought them. Myron's Father told Myron he Ought to be very Happy to have a Mother like that, and all the ladies at the Club said wasn't he Lucky that his mother Understood children so well. Myron couldn't Figure it out, but he supposed Grown folks must know. All he Knew was that it was getting harder all the Time for him to Keep up with his work in school, and that was the Only thing he had to be Proud of, even if his Dad did say that all the Bright boys he ever knew in school had Flopped in Life.

Things went on like That for a long Time, with Myron's Mother Busier than the hen with the Ugly duckling, doing Child Welfare work, and his Father not Paying much Attention to him, except once in a While to Pan him about how the boys in the Neighborhood were out Playing on Saturday afternoons while Myron sat in the house and Read his Books, and a lot of the time just Sat. It was getting so that Myron's head ached a Lot when he tried to read, and he was Afraid to tell his Dad, because he figured that Headaches were invented for Sissies. By the time he got home from School, and Straining his eyes so he Could keep up in his Work, he was all Tired out and he didn't give two whoops what Happened. But he did get Lonesome when he couldn't read or when he ran Out of books. He was only Eleven, and there were a Lot of books around the House that he couldn't Read.

Things went from Bad to Worse, and at Last the time came when he had to bring Home a report from School, and it had a Flunk on it. There was a Note with the report. Myron could Imagine what his Dad would Say. He kept the whole Works in his Pocket for two Days, and told the Teacher he forgot to get the Report signed and bring it Back. Then he made up his Mind to do It. He Tore up the Note, and he changed the Figure on the Report card, and he gave it to his Dad to Sign one Morning, just when he was Leaving the house. His Dad signed it without Looking at it, and then Myron changed the mark back again before he Took the report to School. His Mother was out of Town at a Committee meeting about the Welfare of Starving Children in the Rural Areas of the United States, and Mary the Maid didn't mind if he used his Mother's Desk just so he left it the Way he found it. He took the Report back to School.

The next Morning his teacher sent him up to Report to the Principal. Of course what had happened was that they Saw where he had Changed the figures twice, because any little Boy would get Caught at that, and especially one who couldn't See. Myron was Scared stiff when he walked into the Principal's office. All Boys are scared of Principals when they are in Trouble, even when the Principal was like this one, with a big Shock of white hair, and Eyes that looked like they had little Bright fires in them and were all Crinkled at the Corners. Myron didn't notice that, maybe because he could not see much of Anything that was more than 10 inches Away from his Eyes. He could hear the Principal's voice all Right, though, and he felt Better right away.

The Principal asked him a flock of Questions about how he Got along at School. Myron said All right until this Time. And then he Asked Myron about what Position he played on the class Football team, and Myron said he didn't Play any because he Muffed the Ball and Couldn't pass it Straight, and the Principal said that was a Tough break. And then Myron forgot he was Afraid of principals, and he Told him about how he never could Hit a baseball, and it was Hard for him to see the Blackboard, and books with Big print were not so Bad but he couldn't read the Small letters. But he didn't Tell how his Dad wisecracked about Sissies, and he couldn't see Well enough to notice the Expression on the Principal's face when Myron answered his Question about what did his Father and Mother think about his Eyes. It wasn't a Bad time at all for Myron, and when he went out he Took another note with him that the Principal wrote while Myron was right There, and he Promised Cross his Heart and Hope to Die that he wouldn't tear that one Up. And he didn't. Myron never Found out what made his Dad so Sore when he read the Principal's note. He worried a Lot that night after he was Sent to bed, because he was Afraid maybe his Dad would do the Principal some Harm, if he did All he Said he Would. Myron wondered if he ought to go and Warn the Principal, but he went to Sleep before he Could make up his Mind, and the Next morning he had such a bad Headache that he had to Tell about it and Stay home from School. Myron's Dad went to school that morning and his Mother canceled two Committee meetings that had been postponed until she could get Back to town, and Stayed home, and waited on Myron, and sat near the Window and cried when she thought nobody was Looking, and nearly Scared Mary the Maid out of a Year's growth when Mary picked up the Note from the principal that was on the Dresser, and then she Burned the note. Myron couldn't Figure that one, either. He was about the Most puzzled Kid in town. Myron's Mother kissed him Oftener that Day than she usually did in Weeks. Myron waited for his Dad to come. He sort of expected Maybe his Dad would get Arrested if he did all the Things he Promised to do to the School Principal. Myron knew that his Dad was a Hard egg. His Dad Said so.

When Myron's Dad came Home, the Principal walked down the Street beside him. Myron couldn't see very Well, but his Mother said that it was his Dad and the Principal; and when Myron asked if the Principal seemed to be Okay, she said of Course he was all Right and why wouldn't he be? Then she gave Myron a Funny look and turned her Back and smiled. Then she Wiped her Eyes and blew her Nose. The two men Stood outside and talked for a Long time, and then Myron's Dad came in, but he didn't come upstairs for a long Time. When he did, he didn't have Much to say. Myron could not Help wondering about That.

The next Noon Myron got the Surprise of his Life when his Dad showed up for lunch instead of eating downtown, and afterward his Mother Told him to wash up and put on his New suit, and the Three of them went to Town together, and to a Doctor's office, and Myron got some Drops in his Eyes and tried to read things for the Doctor and didn't make the Grade at All. Neither did his Dad Bawl him out, and there was no Funny stuff about Sissies.

For three or four Days Myron couldn't see at All, and then his Glasses came, and his Dad nearly Surprised the life out of him by taking him out in the back Yard and giving him a baseball Bat. Myron Looked at the first Ball his Dad Pitched to him, and his Eyes nearly popped out of his Head. It looked so big and Clear. He forgot to take a Swing at it. But he Socked the second Pitch on the Nose, and it went over Two fences and Smacked a window. His Dad Laughed and Said it was worth a couple of Dollars and he'd be tickled to Death to pay for it. Myron swung at the next pitch and missed because his Eyes were all Blurred.

MORAL: None so Blind as those who are all Wrapped up in Themselves.

TRAINING FOR ATHLETICS

Chapter XX

Health for the Community

"COME WITH ME, won't you?" said a prominent medical man whose official job is to care for the health of a city of more than 100,000 people. "I want to show you how a modern city health department functions."

Eager to take advantage of this invitation, I spent the greater part of the day with this health officer whose chief business in life is to see that all the citizens of his community are at least given the opportunity to keep healthy.

"First of all," said the health officer as we seated ourselves in his automobile, "I want to show you a house on the waterfront. I'm ordering the tenants out today so that I can have the house burned next week."

"And what," I questioned, "has burning a house to do with health?"

The health officer laughed. "Well," he answered, "just wait until you see this house."

So I was taken from the business district to the water-front. Presently the health officer stopped in front of a large two-story house, a house that at one time had undoubtedly been a respectable dwelling; but at the time of this visit all the windows were broken, and it was so bare of paint that it resembled a neglected old barn.

"A family of seven lives in this house," explained the medical officer.

As we climbed the stairs, the first evidences of the reasons for burning that house became apparent. The stairway was covered with dirt at least 3 inches deep. The first room we entered at the top of the stairs was a shocking sight. The floor was covered with dirty water which had been drained from an old washing machine standing in the room. Egg shells, cabbage leaves and potato peels were floating in the wash water. By exerting care we managed to go through the room without getting our feet soaked.

The next room was the kitchen. The floor was littered with garbage. Cans of various kinds were strewn all over the place, and the room was swarming with flies. It was far from an appetizing sight, and yet the family of seven ate in this room.

"I should guess," commented the physician as we left the house, "that all the adding machines in the world couldn't total up the number of disease germs that are being harbored in that

Presently we stopped in front of a house on the waterfront.

dwelling. Practically every member of the family is in the first stages of tuberculosis. Perhaps you can see now why I am having this place burned. And, besides, I am having the family isolated and watched so that they will not carry disease germs to other persons."

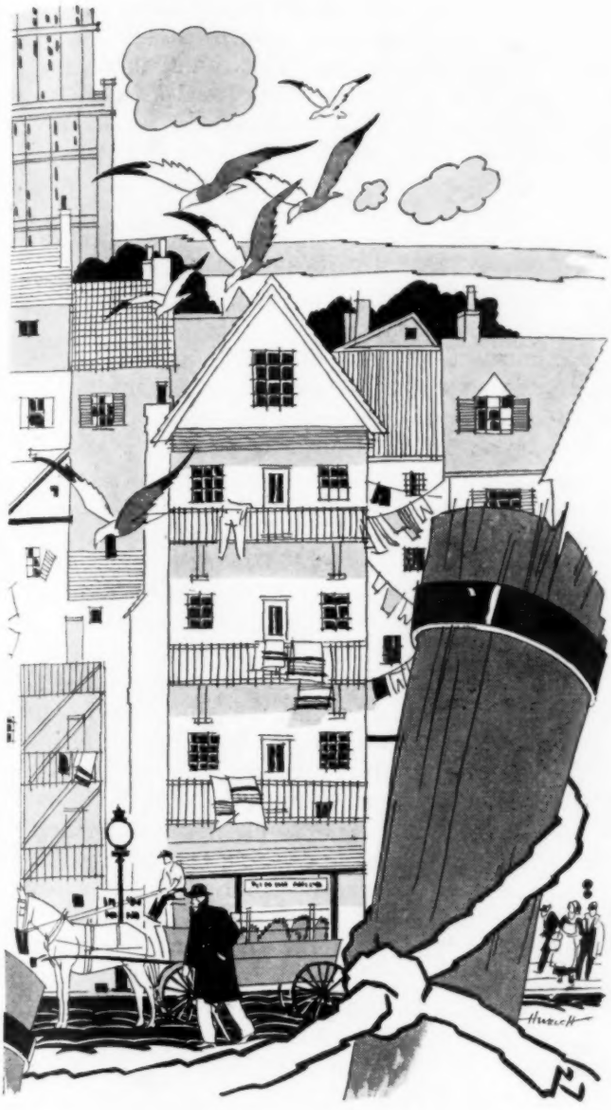
There was only one answer to these comments. Most puzzling of all, though, was the fact that such living conditions could be found in this country in its present highly civilized state. But it was there—a quagmire of filth—and it would probably have stayed there had not an efficient health officer found it and, using the authority given him by law, had it destroyed.

From this travesity of a house, where people actually lived, the health official took me to the health center, an institution which can be found in practically all cities today.

"A health center such as this," began the medical officer, "exists not only to help those who are ill but to aid those who are already

AND HEALTH

By Alfred E. Parker



healthy in keeping their health. Prominent physicians throughout the city come here for a few hours each week, so that the medical care and advice that is obtained here is the best that can be had.

"Practically every day, well persons come here to have a physical examination, a check-up on how their human engine is running. By such means major ailments are prevented and the one who is examined is made happy when he finds that his body is in good condition. We also have a dentist and an oculist who treat a large number of patients each week.

"Occasionally in our examinations we find tuberculous children. Whenever it is possible, these children are sent to the county tuberculosis sanatorium. In other cases children are found who are underweight and undernourished, and they are put in the sunshine school, a school conducted outdoors where sunshine helps the children to build up their health.

"The educational work of the health center is equally as important as that of caring for those who are ill, for surely it is a worthwhile task to furnish instruction in the art of keeping well. This is done by window exhibits, newspaper publicity, health talks, leaflets, posters and moving pictures."

"How," I interrupted, "can poor people afford to come to a place so up-to-date and so well equipped?"

"People who cannot afford to pay," answered the physician, "can come here and receive the best treatment we can give free of charge. A minimum charge is made to those who can afford to pay. So, you see, there is no excuse for any one in this city not availing himself of modern, scientific medical service. And now I want to take you to the main offices of the health department in the city hall."

At the city hall the health officer was enthusiastic about the way the department records the number and location of all communicable diseases. This is done on a large street map of the city, which is posted on the wall; when a communicable disease is reported, a pin of a certain color is placed on the map to show the location of the illness. By such means it is possible to tell at any moment just how much a certain disease is spreading and whether or not it is restricted to one section of the city.

"At any time," resumed the health officer, "we can tell whether or not an epidemic is increasing. Of course, sometimes we err because communicable disease is not reported to us. This happens most frequently in families which are selfish and do not want to be quarantined. Most persons, however, realize their responsibility to the rest of the community, and they quickly report contagious disease. Physicians are required, of course, to report communicable diseases coming to their attention.

"You will be interested to know, too, that in connection with our offices we have a laboratory where we help physicians to diagnose typhoid, spinal meningitis, diphtheria and venereal diseases. In addition, we make tests of the city's supply of milk and water, for infected milk or water will cause a great amount of illness in a short time.

"It is also the health department's duty to see that all food used in the city is as free as possible from disease germs. This is no small task, and in some of this work we are aided by the United States Public Health officials. In our efforts to protect citizens against infected food, we send out inspectors who make frequent visits

to soft drink parlors, cafeterias, tearooms, lunchrooms, restaurants, markets and grocery stores, where a careful scrutiny of the food is made. When infected or decayed food is found, the sale or use of it is forbidden. Factories, bakeries and slaughter houses are also inspected. Fortunately, most business people who deal in food want to sell wholesome food; they know that if they do not, their licenses will be taken from them, and that even if that is not done, they would lose customers because of the bad food.

"It is equally important to arrange for proper collection and disposal of the garbage of the city. This is an even greater task than inspecting the food, for it has been estimated that one person causes one ton of kitchen waste a year. If this is true, more than 120 million tons of garbage have to be disposed of annually in the United States.

"In the disposal of waste, too, the sewage problem seems almost an unsolvable one. Cities use different methods of disposing of sewage. Some cities, especially those in the eastern part of the United States, dump sewage into the same river that furnishes their drinking water. While this seems a poor plan, the sewage is dumped lower downstream than the spot from which the drinking water is secured; in addition, the drinking water is stored, filtered and chlorinated to make it perfectly safe. Other cities have reduction plants where the organic waste is heated for from eight to ten hours under high pressure steam, besides being treated with chemicals. In this way, the solid matter is extracted and used for fertilizer."

Had the physician said no more, I should have been fully convinced of the importance of the work done by the health department, but he continued:

"Another important phase of our work is the campaign we are constantly conducting to educate the public as to the necessity of immunization for diphtheria and vaccination for smallpox and typhoid. We are fairly successful in this campaign although some persons, for various reasons, will have nothing to do with these modern methods of preventing disease; as a result, they often contract these diseases and die.

"Of course, as you know, the toxin-antitoxin or toxoid for diphtheria comes in small tubes. We are able to get it by first injecting the diphtheria toxin into a horse. Blood from the horse which has been immunized against diphtheria is drawn off and allowed to stand till clotting has occurred and the clear serum has separated from the clots. The serum contains the antitoxin. Toxin-antitoxin is a mixture of this antitoxin with the toxin. Toxoid is a recent improvement over toxin-antitoxin. In the immunization process, a tiny portion of the toxin-antitoxin or toxoid is injected into the muscle of the forearm. To develop an immunity, it is necessary to make from one to three inoculations depending on the preparation used. Six months after the last inoculation, the Schick test is made for the purpose of finding out whether the person has become immune.

"It is well to keep in mind the fact that the diphtheria antitoxin is given to those who are stricken with the disease and to those who have been recently exposed. The effect of antitoxin lasts only three weeks, while toxin-antitoxin or toxoid, given to well individuals, produces an active immunity which lasts into adult life.

"In the case of inoculation for typhoid or vaccination for smallpox, the toxins of the vaccines used cause healthy cells to manufacture protective substances. If a sufficient amount of protection occurs, no further treatment is necessary.

"Accompanying our antitoxin and vaccination campaign is the fight we must constantly wage against flies. The fact that flies carry such diseases as typhoid and diarrhea is sufficient reason, surely, for trying to exterminate them. Professor Hodge of the University of Florida estimates that from May 1 to August 1, a pair of flies will produce 5,746,670,500 flies. So, you see, there cannot be any letting up in this fight.

"In this struggle the health department sees to it that such sanitary laws as the covering of garbage cans and the proper disposal of garbage are enforced. In small communities, where the manure pile offers the best breeding place for flies, the problem of getting rid of these pests is even worse than in cities. Treatment of manure piles once a week with iron sulphate and lime or with borax is most effective.

"Indeed, the work of the health department is a gigantic task," said the health officer in conclusion, "for it is our duty to try to keep every resident of the city healthy. It is a slow job at times, but the progress we make encourages us to continue. Always we strive to adopt the most progressive methods. Only recently we arranged with the United States Public Health Service to receive their reports on epidemic diseases in all parts of the world. This information, which is given through the League of Nations, enables us to inform our citizens who expect to travel of the exact conditions regarding disease in the various countries of the world. If a virulent communicable disease is raging in a foreign country, a person who is planning a trip there should know about it. We have such information at hand every day.

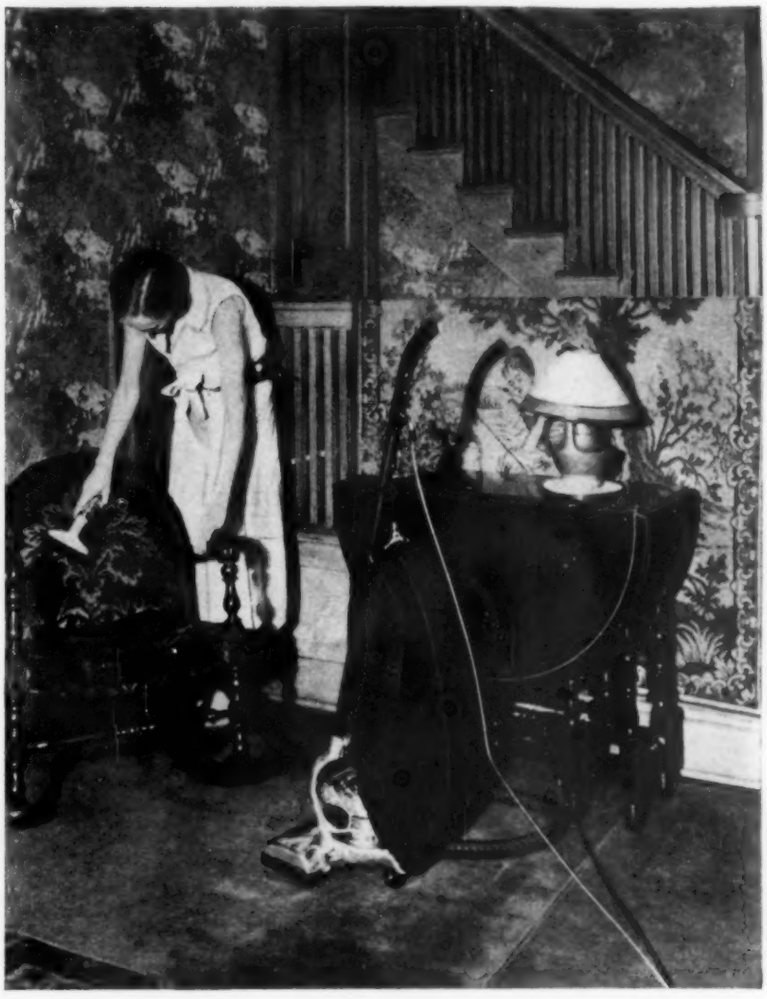
"It is hard to conceive of a modern city without a health department to enforce scientific health regulations. Without health regulations you would no doubt find many houses, not homes, such as we visited today. To live without health regulations is not to live at all, for disease would soon be master, and death the conqueror on every hand."

(To be continued)

Healthy, Wealthy and Wise

By

SUSAN BEACH



A good vacuum cleaner will rid the furniture and rugs of that bugbear, dust, which is so irritating to the mucous membrane of the nose and throat.

MOST OF US enjoy a moderate amount of health, wealth and wisdom. We are well cared for by conscientious housekeepers, family doctors and the public in general; hence, we give little thought to the matter of cleanliness and sanitation unless some phase of it happens to afford our means of livelihood. We eat clean food, wear clean clothes and sleep in clean beds. The unthinkable filth of unenlightened far-away peoples is outside our observation or understanding. We take it for granted that some one is looking after our welfare all the time; this is literally true, yet we little realize how far this care extends.

A visit to a cheap hotel, when an unexpected trip makes it impossible to get a room in our usual choice of hotels, reveals unsanitary conditions against which there should be law and law enforcement. A visit to the dish-washing department of a cheap restaurant might drive away all fastidious patrons. Many soda fountains give the glassware only a perfunctory splashing in cold water followed by wiping on a soiled towel.

All is not clean that shines, and the sparkling glassware may have served fifty previous patrons during the lunch hour. We are friendly folk who live together in groups and share one another's diseases; we should, however, know how to avoid contracting them.

Health authorities agree that dishes may carry germs of disease from one person to another unless they are washed in a sanitary manner.

In Dayton, Ohio, dishes were collected from public eating places by the board of health. The dishes were wrapped in sterilized towels and taken to the laboratory, where they were covered with beef broth, milk or other food conducive to the growth of bacteria and kept warm enough to permit this growth for forty-eight hours. These conditions of warmth, moisture and food would approximate those found in the human body if the bacteria had been taken into

The electric dishwasher offers a highly efficient and sanitary means of performing an irksome task.

the mouth. Restaurants in which the utensils showed ten colonies or less of bacteria were rated as excellent. Others were graded good, fair, poor and very bad. The first published ratings, covering 132 restaurants, rated 37 of them as excellent. They made the fact known, offering greater assurance of cleanliness to their patrons. Two and a half years later, out of 222 eating places 70 per cent were "excellent" and only 7 per cent were "very bad."

In New York City the local board of health requires that restaurant dishes shall have "a thorough rinsing or spraying or immersion in clean boiling water (212 F.) for a period of one minute." If the temperature of the rinsing water is as low as 180 F., the dishes shall be kept in it for not less than two minutes. They may be sterilized by the use of live steam.

In New Jersey the law reads: "All utensils shall be subjected to treatment with boiling water or steam under pressure, for at least three minutes after each service, or by such other method that effective sterilization of each article shall be properly carried out between each use."

Requirements in other localities are similar. There is still a possibility, however, of spreading bacteria on glassware and silver after steam sterilization, if towels which have not been sterilized are used for wiping. China is usually dried by hot air.

Machine washing offers greater safety, since hotter water can be used than when dish-washing is done by hand. However, it may be quite as unsanitary as washing in the sink, if water at too low a temperature is used. The cleanliness of hand dish-washing depends largely on the health, habits and scrupulousness of the dishwasher, as well as on his facilities for renewing the suds when they look gray and greasy, and for using a boiling water rinse on every dish.

If the precautions taken in hospitals, for dishes used by patients with scarlet fever or diphtheria, were taken in restaurants, the spread of pneumonia, tuberculosis, common colds and influenza would be partially checked, although the sneeze and the cough are important as spreaders of infection.

Inspection includes an investigation of the cupboard in which dishes are stored, to see that it is dry, well ventilated and free from dust and vermin. Employees are required to wear clean aprons, to wash their hands thoroughly and frequently and to maintain a high standard of health. They are taught to handle dishes without putting their fingers over the rims, or on the tines of forks.

Frequently the difficulty in the home is that though the maid of all work is satisfactory in other respects, she does not respect her job of dish-washing; she uses water which is lukewarm and comfortable to the hands. She may take pride in the sparkling tableware which designates her as a good housekeeper and increases the diners' appetite and pleasure of eating; but she usually has little interest in bacteria for, never having seen them, she does not fear them! If she should spend a day in a bacteriologic laboratory where she could see the millions of bacteria which grow on a sterilized plate that has been wiped with a soiled dish-

The small size of some electric washers makes them particularly convenient and useful.

cloth or on a plate that has been exposed during sweeping or dusting, she would be convinced of the importance of this unseen army of bacteria which live, multiply and cause disease and possibly death, but themselves are killed or rinsed away by boiling water! Dr. William H. Park has said, "I think no germ pathogenic to man can remain alive if boiling water actually reaches it for even an instant."

I once had an enlightening personal experience with an electric dish-washer. It was used for several days under the usual home conditions in a small family where the number of persons present for meals varied from one to eight, usually averaging about four. The usual wide variety of meals included all manner of greasy, eggy and milky ingredients and other food materials which are difficult to remove from dishes. All the cooking utensils were washed in the dish-washer, although in the usual kitchen this is done in the sink during meal preparation. As a matter of further experimentation, every piece of china, glassware and silverware that had been stored away for rare occasions was washed. This gave me an opportunity of seeing how the various pieces fitted into the dish-washer; I even washed the waterless cooker and the coffee dripper in it. The operation was simple when it was done according to the directions that came with the dish-washer.

I was amazed at the satisfactory results! Particularly was I pleased with the fact that my fastidious maid did not have the slightest desire to give a final polish to the fragile clear glassware and to the silver knives, which she had always kept so free from tarnish or streaks that they shone like mirrors. Nor did she find any water streaks on the glass baking dishes.

My own experiences with the dish-washer proved to me that it is practical and convenient, and the clean dishes taken from the dish-washer meet a high esthetic standard; and studies carried on in a bacteriologic laboratory over a period of five years have shown that the sanitary efficiency of the dish-washer is from 60 to 300 per cent greater than that of hand dish-washing.

Here is one typical experiment: The dishes for four persons for one day were spread thinly with food inoculated with Bacillus coli in the ratio of 1,000 organisms per gram of food. Medium thick white sauce was used for the dinner plates, sauce dishes and vegetable dishes; cocoa for the cups, glasses and saucers; mayonnaise for the salad plates, and melted butter for the bread and butter plates. The dishes were then placed in the dish-washer; some of the dishes were washed at once. Others were dried at room temperature for six hours before being washed and were then washed according to the directions for the particular dish-washer being used: a five-minute wash with 5½ quarts of water, 2½ tablespoonfuls of soap flakes and 1 teaspoonful of water softener, followed by a one-minute rinse with 1 teaspoonful of water softener in the water and then a one-minute clear rinse. The water was put into the machine at 140 F., a temperature too hot for the hands.

Immediately after washing, a sterile swab was rubbed over the entire surface of each kind of

dish. The swab was put into a tube of culture medium, and the bacteria were later identified.

The dish-washer used for these experiments sterilizes with reference to the B. coli, whether the dishes are washed immediately or left to dry for six hours after use. For comparison, exactly the same kinds of clean dishes, spread with the same infected foods, were washed by hand. Water as hot as the hands could stand, 115 F., was used, and the dishes were rinsed with water at 140 F. After the dishes were dried on two clean dish-towels, they were immediately swabbed, and the cultures were studied.

A number of homes in good residential districts were visited, and the housewife was asked to put the dish-cloth and dish-towel which she was using into separate sterilized cans. These were then shaken with sterilized water, which was tested according to the standard method of the American Public Health Association. It was found that bacteria on dish-cloths ranged from 1 to 7 million to the square yard, and on dish-towels from 75,000 to 1 million to the square yard. This test shows the possibility of spreading dangerous infection from one member of the family to another.

Food must be produced and handled in a clean manner and kept properly stored and refrigerated. In the restaurant or in the home, it must be kept covered to protect it from dust. Tin cans of food should be rinsed off under running water before they are opened, so that the edge where the contents are poured out will not be contaminated. Milk bottles are cleaned and protected. Oranges are not touched by human hand until they reach the grocer or the kitchen; pickers wear gloves, so that they will not scratch the peel with the finger nails. The unbroken skin of the kitchen worker's hand has a self disinfecting power as a defense against microbic invasion. Small cuts and scratches should be touched with a general antiseptic to prevent infection and should be covered. The housewife's hands should be washed frequently under running water, and the finger nails should be cleaned with an orangewood stick.

The common bar of soap is in no sense to be classed with the common drinking cup and towel, because pathogenic organisms and spores do not propagate on soap. Cultures of bars of soap collected from railway stations, from a sewage disposal plant and from various kitchens failed to show a single living organism; nor were bacteria to be found on new cakes of soap, as the process of manufacture kills them. A casual rinsing of the common bar of soap renders it suitable for the next user. A good lathering of soap and a thorough washing of the hands is one of the most necessary preparations for cooking that the cook can make.

Dr. John E. Walker showed that ordinary soaps, used with cold water in concentrations produced by moderately careful lathering, kill the germs of diphtheria, pneumonia, epidemic meningitis and gonorrhea, and that washing in hot suds is still safer.

Because of the present vigilance of laundry owners and the close inspection of laundries, one can be quite sure that the bundle received from the commercial laundry has been delivered in a sanitary condition.

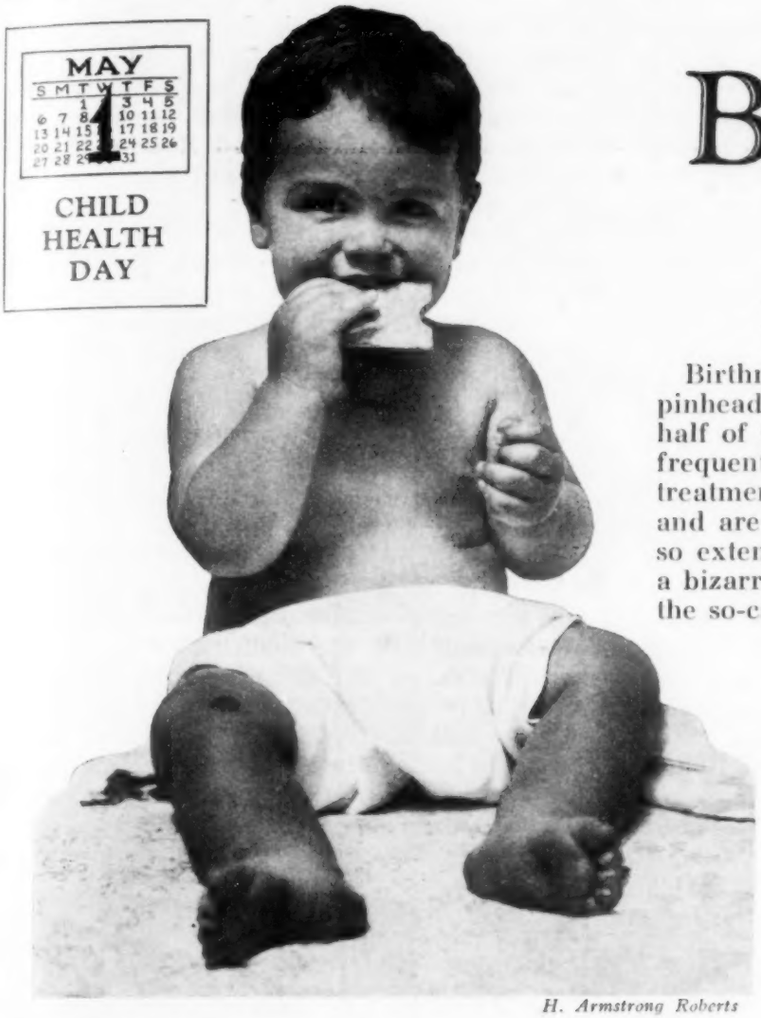
The soap and hot water necessary to produce the desired whiteness of clothes are destructive to germ life. Dr. W. W. Peter made the statement that boiling clothes is unnecessary from the standpoint of health except for extremely dirty pieces and for garments that have been worn by persons suffering from a communicable disease. For all other pieces the effects of the chemical contents of the soap, agitation of the suds and a temperature suited to the fabric are sufficient to release the dirt and make the article hygienically clean. If the garment is exposed to the sunlight for drying and to the heat of an iron, two more safeguards are added.

The action of some electric washers is so gentle that they may be used for fine laces, delicate curtains or fragile rayon and silk lingerie. One should make sure that all clothing is pushed below the water line. Fine soap flakes are thoroughly dissolved to make a rich suds. Lukewarm water and gentle soap are used for woolens, silks and synthetic fabrics. Borax or some other water softener should be used with hard water in a sufficient quantity to produce 1 or 2 inches of good suds on top of the clothes at all times without the use of an excessive amount of soap. Water softener may also be used in the rinsing water. Rinsing and bluing may be thoroughly accomplished in the washer itself.

Strong laundry soap or washing powder should be used for stout cotton fabrics. Badly soiled garments must be soaked to loosen the dirt; when the water becomes dirty, it is replaced with fresh clean suds.

The small size of some washers makes them particularly convenient for washing children's clothes which are needed before the regular wash-day. Washing of hosiery immediately after wearing prevents damage from perspiration dried in the silk. With the small washers, which may be used on the kitchen table or in the bathroom, a high standard of cleanliness may be maintained with a limited supply of linens. They can also be used with a nonflammable fluid for dry cleaning.

During an illness, extra sheets may be washed in the washer. In order to prevent the spread of a disease, all infected bedding, towels and handkerchiefs should be boiled in strong soapy water for from twenty minutes to an hour. The use of disposable tissues saves handling germ-filled handkerchiefs which are dangerous to health. Modern scien- *(Continued on page 470)*



H. Armstrong Roberts

Birthmarks

By

JOSEPH JORDAN ELLER

BIRTHMARKS are malformations of the skin or mucous membranes. They usually are present at birth but in some cases may not appear until many years after birth. Occasionally they do not develop into noticeable marks until middle age. In such cases, they were probably present deep in the skin at birth but were so small as to pass unnoticed by the naked eye and later grew discernible.

A large number of superstitious ideas have arisen concerning the causes of birthmarks. Many persons think that certain incidents which occur during the pregnancy leave stigmas or signs on the baby in the form of birthmarks. Therefore if a baby is born with a strawberry mark, the mother will invariably remember having had an uncontrollable and unsatisfied appetite for strawberries; or if the baby is born with a hairy pigmented mole, the mother will tell the story of having been frightened by a mouse at some time during her pregnancy. If the birthmark is extensive, the mother will state that she was badly frightened by a dog or a horse. Another mother may be convinced that the fish-skin appearance of her child was due to a desire for fish during the pregnancy. These superstitions have been handed down from generation to generation. There is absolutely no scientific basis for such beliefs.

Birthmarks may vary in size from that of a pinhead to areas covering half or more than half of the body. The small ones occur rather frequently and are usually quite amenable to treatment. The larger ones are difficult to treat and are exceedingly disfiguring. They may be so extensive as to give the unfortunate person a bizarre appearance. These persons make up the so-called monstrosities or side-show freaks. The famous dog-headed boy and the various fish-skinned or dog-skinned children are manifestations of such extensive birthmarks.

Moles may appear in various forms. The most common are the fleshy brown moles, which may be present on any part of the body. They may be flat or elevated and may be flesh colored or pigmented with various shades of brown. The flesh colored moles are called non-pigmented birthmarks, while the brown ones are termed pigmented birthmarks. Some of these growths may have an abundance of coarse and fine hairs, while others do not contain any hairs. Moles are therefore classified as hairy and nonhairy.

Other birthmarks are made up of many small blood vessels and contain considerable blood. They may be flat with the surface of the skin and have a characteristic port wine color which accounts for the name port wine mark. Other blood vessel birthmarks may be raised above the surface of the skin and are soft and spongy. The color and shape of this type often makes them look like strawberries, and so they are called strawberry marks. If the birthmark is made up of many little veins, the color is usually of a bluish or purplish tint rather than red. While birthmarks may occur anywhere, they often occur on the lips or tongue and look like little blood blisters. If the blood vessel birthmark is deep in the skin, it may appear more bluish in color; while if it is near the surface, it is more apt to be reddish.

At times, birthmarks may appear as warty growths, singly or as a long line of warts, usually involving one side of the body.

There is another type of birthmark in which the skin has a dry, hard appearance associated with the formation of scales. This scaling factor may be so extensive as to simulate fish

scales, which accounts for the name fish-skin, or ichthyosis.

The majority of birthmarks, if they are not too extensive, are not dangerous to health and are quite amenable to treatment. There is one type of mole, however, that is extremely serious and provides a constant menace to the victim. This birthmark is bluish-black or slate colored; it is usually flat but may be elevated. It may vary in size from that of a pinhead to several inches in diameter. The surface is smooth and, as a rule, no large or coarse hairs grow from it. If this type of mole becomes irritated, it will begin to grow suddenly and develop into a serious and fatal form of cancer. If it is not treated at once the cancer will soon spread through the blood to all parts of the body, and in a comparatively short time death will result. Therefore these "blue-black" moles must be handled carefully. If they are situated in areas which are exposed to irritation, they are extremely dangerous and should be treated by a physician who is informed as to the proper type of therapy. If they are in areas not subject to irritation and have shown no signs of growth, many physicians feel that it is well to leave blue-black or black moles untreated.

The strawberry marks respond well to radium. The ideal time to treat this type of birthmark is during the first few years. After this the strawberry mark does not respond as quickly to the treatment, and the skin does not heal as satisfactorily. Some marks of this type will disappear without treatment, but others will continue to grow larger, and if they are not treated, they may result in extensive and disfiguring scars.

The port wine mark is not as amenable to treatment as the strawberry mark, but it can be improved considerably by repeated peeling of the area with carbon dioxide snow. This requires skill and should be attempted only by a physician.

The hairy pigmented moles may become considerably smaller and even disappear entirely when the coarse hairs are carefully removed by means of electrolysis. The nonhairy and nonpigmented mole can be removed with good results by means of the electric needle or by applications of acid or carbon dioxide snow. The warty moles can also be removed by means of desiccation with the electric needle.

Birthmarks on the face are prone to infection as a result of constant exposure to the elements and to various forms of irritation. When they become infected, they are more difficult to treat and may leave bad scars. It is therefore preferable to remove such growths before they can give rise to more serious trouble.

Attention to Be Focused on Youth of Nation

April 28—May 5

From a celebration sponsored by the Rotary Club in one American city, New York, in 1920, Boys' Week has expanded into Youth Week and as such has grown to be an annual event of great importance in widely separated parts of the world. The observance of Youth Week in the United States this year will be from April 28 to May 5.

The first Boys' Week, confronted as it was with the skepticism of a large city, had no lack of difficulties with which to contend, but it overcame them and achieved a success which startled the nation as it worked for the betterment of its men and boys.

The year after the initiation of the idea, New York was joined by Baltimore, Kansas City, Chicago and Newark in carrying out Boys' Week. The next year, 1922, Boys' Week was celebrated in 207 cities and in 1923 in 608 cities. By 1926 the movement was general throughout the United States and Canada, and in 1927 it spread to cities in Australia, China, Cuba, Great Britain, Japan, Mexico, New Zealand, Puerto Rico, South Africa, and South America. Since then Boys' Week has been observed generally throughout the world, and in many cases it has been expanded to Youth Week.

The various phases of Youth Week will be presented on the following days: April 28, Youth Recognition Day; April 29, Youth Day in Churches; April 30, Youths' Vocational Day; May 1, Youths' Health Day and Evening at Home; May 2, Youth Day in Entertainment and Athletics; May 3, Youth Day in Schools; May 4, Youth Day in Citizenship, and May 5, Youth Day Outdoors. The object of stressing these various phases of activity will be:

1. To focus public attention on the boys and girls as among the world's greatest assets by making the nation think in terms of youth.

2. To interest every one in boys and girls, to interest boys and girls in themselves, and to emphasize fundamentals in character building for citizenship.

3. To develop a community esprit de corps in the home, school, church and spare-time organizations which deal with boys and girls.

4. To advocate for every boy and girl an equal chance to work out his or her destiny without the handicap of underprivilege or overprivilege.

BEWARE THE AMANITA!

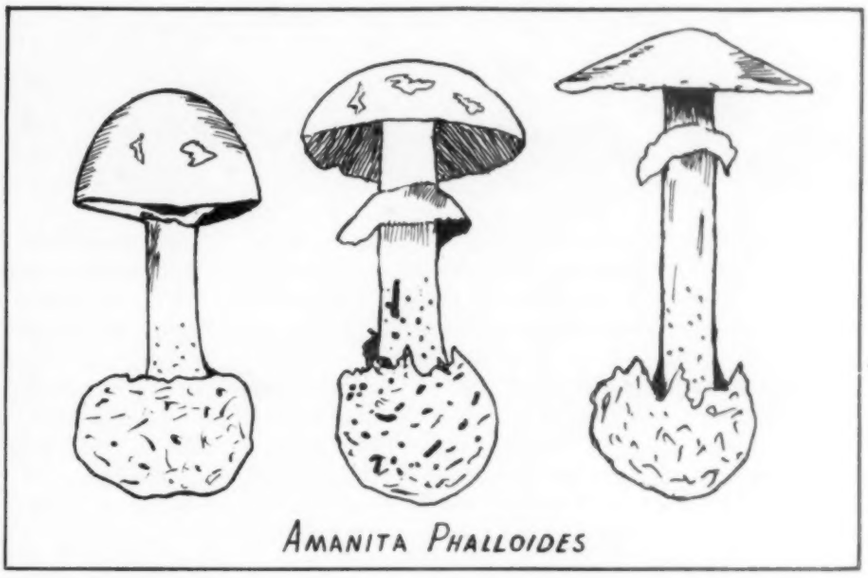
An Innocent-Looking Mushroom— But a Villain in Disguise

By

ROLLIN H. STEVENS

as told to

WENDELL HOLMES



Three stages in the development of Amanita phalloides, the "death angel," showing the basal cap, or volva; the wart-covered cap; and the ring, or annulus.

ALTHOUGH it is the opinion of expert mycologists that, for the uninitiated, searching out rattlesnakes is a far less hazardous pastime than mushroom hunting, nevertheless the age-old lure to gather the fungi progresses from one generation to the next with seemingly unabated fervor. Why this is true remains open to question. Some authorities say that the reason is purely economic and that mushroom hunters are urged by the opportunity to fill the family larder with delicious morsels at small expense. Others argue that the reason is psychologic and that the element of danger involved serves to make the hobby that much more alluring.

Whatever the reason, it is a fact that about this time each year many otherwise normal persons become obsessed with the idea that mushroom hunting does not involve any more preparation than the purchase of a large basket and the selection of a promising spot where numbers of the fungi are in evidence.

This circumstance has been particularly noticeable during the past four years, the stress of economic conditions having made mushroom hunting all the more tempting. Some amateur hunters have even gone so far as to make a business of it, offering their dubious wares to unsuspecting housewives by means of door-to-door canvassing methods. Others have placed their doubtful selections on sale in the large, open-air markets found in every city. Bushel baskets of white-gilled mushrooms, often wormy and often in various stages of decomposition, are offered to the public in the guise of food. In many cases they are marketed without first having been properly inspected by a qualified public official. Usually they are unfit for human consumption, even though they may not be naturally poisonous.

In consequence, a great many persons all over the country have been made needlessly ill, a certain proportion of them fatally so, because their knowledge of mushrooms has been so limited that they have failed to distinguish between the edible and the poisonous kinds.

Although the edible species of mushrooms greatly outnumber the poisonous varieties, the danger of the latter is ever present, for they are widely distributed all over the country and are often found growing in close conjunction with their nonpoisonous cousins. In addition, Amanita phalloides, the most deadly of the poisonous varieties, so closely resembles some of the best edible species that even experts may be deceived at first glance. Others of the Amanita family are less poisonous, while still others are edible; but it is best to learn to recognize the genus and then to leave it alone.

In this connection, I recall vividly an experience that I once had. While on one of my frequent mushroom hunting expeditions, I suddenly came across an excellent patch of rooted Collybias, a most delicious edible variety. They flourished in great numbers, and I eagerly fell to stripping off their caps, using my fingers in comblike fashion and carelessly throwing the caps in the basket. On peering into the basket

Century-Chace

About this time each year many otherwise normal persons become obsessed with the idea that mushroom hunting involves only the purchase of a large basket and the selection of a promising spot where numbers of fungi are in evidence.

to inspect my prizes, imagine my astonishment to see, lying right on top, the cap of an Amanita phalloides, or "death angel," which contained enough colorless, tasteless, phallin poison to cause the deaths of several persons.

Needless to say, since then I have been exceedingly careful to dig up the whole plant and to inspect carefully each cap and stem before depositing it in the basket, for if the "death angel" had been at the bottom instead of the top, I probably would not be here to write this article.

One cannot be too cautious, therefore, in gathering mushrooms or in buying them from sources which have not been proved reliable. Moreover, the single reading of a book or magazine article is scarcely enough preparation for the would-be mushroom hunter.

Mushrooms grow from microscopic spores, or seeds, which have been deposited in rich earth or decaying organic matter. These tiny seeds develop into the spawn, or mycelium, a series of minute white threads which in turn become covered with a multitude of tiny knobs. The knobs continually push themselves upward toward the light, each gradually developing into a mature fungus having a cap, or pileus; usually a stem; often a ring, or annulus, composed of the remains of the membrane that covered the gills and spores when the plant was young, and always some kind of spore-bearing membrane which may line the under surface of the cap or its whole outer surface.

This spore-bearing membrane is extremely important to the mushroom hunter as it is by this means and by the color of the spores that the various species of mushrooms may be identified. There are several ways in which the myriads of tiny spores are attached to the parent mushroom, and all fungi are divided into separate classes in accordance with the way in which their spores are attached. A description of the four most common classes is given in the following paragraphs.

First, there are the gill-bearing mushrooms commonly known as the agarics. The spores of this class are contained in gills, usually thin laminas, or plates, placed edgewise more or less closely together on the under surface of the cap. In some cases the gills are shallow, blunt and rounded like veins. In others they stand out more predominantly.

The second division consists of those known as the polypores. Instead of having gills, these mushrooms are equipped with small vertical tubes, the surface openings of which are known as pores. The tubes and pores are placed rather closely together on the under side of the cap. The surface adjacent to the pores is smooth, and the whole pore-bearing membrane is easily removable from the rest of the cap.

The third class is composed of the teeth-bearing, or spine-bearing, mushrooms, the common genus being the hydnum. The fungi of this class have their spore-membrane borne on slender spines, or teeth, which depend from the under sides of the caps.

The last division is known as the thelephores. These have their spores scattered over the entire surface of the fungus and are represented by the coral mushroom, which resembles coral in its growth.

The color of the spores is another important feature by which the determination of the species can be made. The colors vary from white through pink to brown, purple and black; and though many of the edible varieties have pure white spores, it is important to remember that those of the poisonous Amanita family are always white.

To determine the color of the spores, remove the cap from the stem and place it, gills downward, on a piece of paper, using dark paper if you think the spores are going to be white. Place an ordinary drinking glass or bowl over the cap to shut out drafts of air, and allow it to remain for a few minutes. The spores will soon be found deposited in fine, radiating,

powder-like lines in an exact reproduction of the under surface of the cap.

The white spores of the poisonous Amanita are only one of the similarities between it and the many edible varieties. Its cap, stem, gills and ring likewise closely resemble many of the nonpoisonous kinds. However, the Amanita has another characteristic which is most helpful in distinguishing it from edible varieties. This is the cup, or volva, which surrounds the base of the stem. In gathering mushrooms, the hunter should be careful to get the entire stem and to inspect it carefully for evidences of this feature. It may be necessary to dig down into the ground for 1 or 2 inches, but it is a wise precaution and the hunter usually finds that it pays in the long run. If there is any indication of a cup at the base of the stem, the mushroom should be promptly discarded as it is highly possible that it is one of the poisonous species.

The Amanita also has other features which help the hunter to tell it from the nonpoisonous kinds. One of these is the fact that it usually grows singly in the woods or in stumpy areas, while many of the edible kinds prefer the open fields; another is the sometimes warty appearance of the cap, the remains of a membrane which covered it in its first stages.

In general, therefore, any specimen that deposits white spores and has a cup at the base or a wart-covered cap should be rejected. The phallin poison with which the "death angel" is filled is colorless and tasteless, and produces its fatal results by destroying the blood cells. Since one cap contains enough poison to cause the deaths of several persons, it is well to inspect and test carefully each specimen gathered.

Because there are some 40,000 known varieties of mushrooms, it is obvious that a description of their individual characteristics cannot come within the scope of a single magazine article. Indeed, several volumes could be written on this phase of the subject without exhausting it. I shall therefore attempt to describe only a few of the more common varieties found in the United States, in the hope that those who are urged to fare forth on mushroom hunts will find the sport less hazardous.

Perhaps the most common of all mushrooms is Agaricus campestris. This is the mushroom of commerce, and it derives its name from the Latin word meaning campus, or field. It has a rather broad, convex cap, from 1 to 5 inches in diameter, rather thick, with firm white flesh. The gills are close, connected by veins, and are not attached to the stem. Their color varies with age from pink to brownish black, and the color of the spores is purplish black. The stem may be as long as 3 inches, with a ring, generally torn, located about in the middle of it. There is no volva. This species has a mild, nutty taste and is usually found growing singly in pastures and other open spaces.

Another variety which is common all over the United States and which can be easily recognized by the amateur is the Coprinus. In this family there are three divisions, Coprinus comatus, or "Shaggy Mane"; Coprinus atramentarius, or "Inky Cap," and Coprinus micaceus, which takes its name from the Latin word meaning mica, or granular.

Coprinus comatus has a cap, from 2 to 5 inches long, the margin of which splits at the lines of the gills and rolls back over the cap in maturity. The center of the cap is a rather dark purple, and the remainder is covered with concentric white scales tipped with black. The flesh is white when the mushroom is young, gradually becoming brown or black as it grows older, and finally deliquescing into an inky black fluid. The gills are crowded closely together, turning from a pinkish shade to black, and, like the rest of the cap, finally melting into an inklike fluid. The spores are black. This mushroom sometimes has a stem as long as 6 inches, surrounded by a thin, torn, often movable ring. There is no volva; and while this fungus is edible, it has a strong taste and an earthy odor. It is found in dumping grounds and places where ashes and refuse are left.

Coprinus atramentarius gets its name from the Latin word meaning ink, because, like the comatus, it also deliquesces into a black fluid when it reaches maturity. Its cap is not so large as that of Coprinus comatus, however, being only from 1 to 3 inches long; and like its cousins, it has the same characteristic split margin that rolls back over the cap when deliquescence begins. The meat is grayish and soft. The gills are close to the stem and adhere to each other. The spores are black. The stem often grows to a height of 5 inches with a ring near its lower end. This species has a mild, delicate flavor and is easily found, as it grows in large clumps on lawns and in gardens and similar moist places.

Coprinus micaceus has a cap even smaller than the comatus and the atramentarius, it being only from 1 to 2 inches long. It retains the family characteristic of being split at the edges when it begins to deliquesce. The cap is dark brown, shading into tan at the rim, and the whole is covered with glistening white granules which tend to disappear as the fungus grows older. The flesh is grayish white. The gills are light gray at first, later turning black and dissolving into the black fluid, especially in moist weather. As in the other Coprini, the spores are black. The stem is rather short, being only from 1 to 2 inches high. If there is a ring at all, it will be found near the lower end of the stem. Coprinus micaceus has a mild, nutlike flavor, and it grows in large clusters in the vicinity of elm and poplar trees and decayed elm stumps.

Hypholoma appendiculatum is so named because parts of the veil, the remains of the

membrane that covered it when young, cling to the margin of the cap. This is one of the choicest of all mushrooms. It has a small, thin, fragile cap from 1 to 2 inches wide, with white flesh. The gills grow close to the stem, turning from white to grayish brown and then black, and the spores are purplish black. The stem is about 3 inches long without a ring or volva. The taste of this mushroom is mild and delicate. Hypholoma appendiculatum may be found growing in large groups near stumps and on lawns.

Marasmius oreades, "fairy ring," or "Scotch bonnet," as it is sometimes called, is a delicious edible mushroom with white spores. It grows in abundance in pastures and on lawns, and it can be distinguished by its white cap, which is from 1 to 2 inches wide with a knob in its center. Its gills, like its spores, are white and are far apart. It has a tough, fibrous stem, from 2 to 3 inches long, without a ring or basal cup. A characteristic of this species is the fact that it shrivels up in dry weather and comes out fresh again after a rain.

The "honey" mushroom, or Armillaria mellea, grows in large clusters in the open woods. It is exceedingly prolific, often covering large areas of stump-covered ground. It has a cap, from 2 to 8 inches in diameter, which is sometimes covered with hairy tufts or scales and which varies in color from honey-yellow to brown. The gills extend down the stem, are close together and have streaks of brown in them when the fungus is mature. The spores are white. The stem reaches 4 inches in length, and there is little, if any, evidence of a ring. There is no volva. Although the flesh of this mushroom is rather tough and coarse, it cooks easily and is relished by many mushroom collectors.

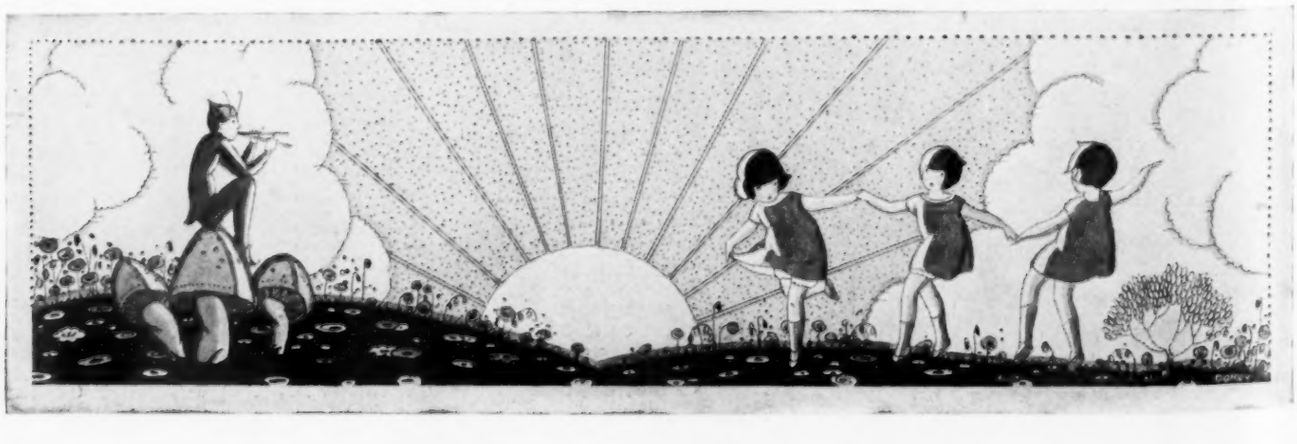
Tricholoma personatum varies in color from pale gray to bright violet. It is usually found growing under old straw, leaves and other litter, and it is common in all parts of the United States. The cap is from 1 to 2 inches wide, the flesh is white, and the gills are crowded together and notched at the stem. They are violet at first, later changing to brown. The spores are a dirty white. The stem is from 1 to 3 inches long without a ring or volva. It has a mild odor and a delicious flavor.

The "oyster" mushroom, or Pleurotus ostreatus, is one of the easiest of all to identify. It gets its name from the fact that it grows in clusters which override each other in a manner similar to that in which oysters grow. It has a short stem, or stalk, growing from the side of the cap, and it is found attached to the trunks of oak, maple, poplar and elm trees. The caps, which are from 3 to 5 inches in diameter, are white. There is no ring or volva. The gills are yellowish at maturity, and the spores are white. This mushroom is delicious.

Another species which is easily recognized because of its distinct color and shape is Polyporus sulphureus, or the "sulphur" mushroom. It has no stem; the caps fasten themselves in overlapping clusters directly to tree trunks and stumps. There is another distinguishing feature also in the fact that the sulphur mushroom has pores instead of gills. The caps are at least 8 inches wide and have red tops and sulphur-yellow edges and undersurfaces. The meat of the cap is yellow, and it has a mild flavor.

In addition to the mushrooms described, there are, of course, the many varieties of puffballs. Most of the known kinds are edible. Calvatia gigantea is one of the best of these, being from 12 to 20 inches in diameter and covered with a smooth, whitish outer skin. Puffballs should not be eaten unless they are white all the way through. They are not usually poisonous when they do not conform to this description, but they are liable to be bitter, distasteful and unwholesome.

In conclusion, let me reiterate that one reading of a book or a magazine article is scarcely enough to qualify a beginner as an informed mushroom hunter. There is no royal road to knowledge and no magic formula for making infallible choices. Only by years of practice does one become proficient enough to know intimately the characteristics of a small portion of the many different species. My advice to the person who has a craving for mushrooms but who is a novice in the art of gathering them is to buy cultivated mushrooms from a reputable dealer. To do otherwise is to invite disaster.



They're "Real Mothers" to Doll-Babies

The bath carries all the usual complicated consequences when these European school girls take their first lessons in motherhood.

How to wash baby's eyes must be learned, not for use in emergencies, but as a matter of pure routine.

The young "mother" shown above is as scientifically and tenderly careful with her doll-baby as if it were her own child.

Mothers of the future must understand the anatomy of the baby, and so they study a skull in the picture at the right.

Photos by Soibelman Syndicate

Parental Contest for Child Favor

By
E. S. RADEMACHER

Ewing Galloway

Both parents played up to the child, never once suspecting the subtle way in which they were being used.

CLINICAL WORK in mental hygiene affords unusual opportunity to view the many and varied relationships of everyday family life. Among the hosts of children coming annually to clinics there may be certain similarities in the nature of problems and in parental attitudes, but for the most part, each child shows a definite individuality and each family a different relationship among its several members. Many of the problems for which treatment is required are, of course, exaggerations of ordinary difficulties which have reacted to an extreme degree and hence are often detrimental to the welfare of the children. Because of the unusual nature of such material, clinical workers are inclined to use these instances as illustrations from which they seek to draw inferences of similar trends in other homes. Such a method is often erroneous, for instead of inspiring parents to make a practical application of the idea to their own lives, it has sometimes influenced them to return home congratulating themselves on their own fine state of integration.

In discussing this topic, "Parental Contest for Child Favor," I may again fall into the same error, for the illustrative material that I shall use affords rather extreme examples.

A little boy was taken to a clinic by his mother, who explained that, although he was no problem except in minor ways, she wanted to make sure she was doing all she could to insure his future adjustment. The little boy, 10 years of age, exhibited a whiny, restless behavior throughout the examination. He remarked that he did not like school because it was "just too much work." He did not do the work the teacher gave him because she was "crabby and mean." There was never any doubt in his mind that he could do his lessons if he wanted to, but he did not care to. After school he played, but usually he played at home and not with other children. He went downtown or to movies or visited some place with his mother. During the examination he frequently whiningly asked whether he could go, and became pouty and sullen when he was asked to wait. He evidenced a real antagonism and a reluctance even to make the effort to respond to simple questions concerning the ordinary activities and ambitions of children his age. He did not care whether or not he was liked, because his father would get him things or his mother would help him anyway.

In further discussion the mother told of her many trials and efforts to help her son. She intimated that her husband spoiled the boy by constantly purchasing equipment for him and did not cooperate with her in the matter of discipline. She added that there were many things which she would never allow the boy to do but that his father always gave him permission. She felt therefore that she was losing control over the child, so she had to do things for him, and she always helped him in his school work.

Later the father came to the clinic. He, likewise, remarked that because the boy was with the mother so much he felt that he was losing his hold on the lad, so when he came home from his many trips he always brought him something. Sometimes he would give him money with which to buy things. If the boy wished to have ice cream or candy, the father provided for this, because if he did not the son would feel

that he was "one of those mean fathers that so many other children have to put up with."

These parents, each afraid that the other would gain favor, constantly vied with each other in their efforts to dazzle the child and win his approval. The child has become extremely self centered and has developed a complete dependence on his parents to do everything for him. The boy tends to look on personal effort in even ordinary achievement as evidence of abuse.

This case, it is true, is rather extreme, yet it admirably illustrates a general pattern of the results of certain fears and strivings in the parental adjustment that are often present, though perhaps not to such an unusual degree.

Many fathers tell clinical workers of their feeling of concern over the fact that they are expected to dole out the heavy discipline. They fear that such a rôle will color the child's attitude toward them, and they try to make up for it in other ways. In the same way, mothers fear that, because of their own more intimate association with the child and the greater number of occasions on which they must inhibit the child's activity, the child will be lead to dislike them. The fact that father takes frequent excursions away from home and has a tendency to return with gifts for the child likewise causes mother added concern.

Children have actually stated in clinic examinations that if they wanted to obtain a request from one parent, the scheme of showing affection or attention to the other would invariably bring the desired results. One little girl knew her parents so well that she took advantage of all those occasions in which the desires of one parent were directly thwarted by the other. If her mother was somewhat put out or aggrieved because some request had been refused by the father, this little girl would immediately become solicitous for the mother and in this way bring about her desired trip to the movies. She would immediately agree with the mother that the father was mean and prohibitive, whereupon mother invariably became expansive in her grief under such solicitude. Likewise the father was used in similar instances. Both parents would play up to the child, never once suspecting the subtle way in which the child was using them.

A father once went to a clinic to discuss a treatment plan for his boy and in the course of the interview stated that, though there were many ways in which he felt the boy should definitely change, yet he hesitated to interfere because of the ensuing trend of events. He remarked that on a few occasions when the boy's behavior had been rather outstandingly bad, he had administered some disciplinary measures, whereupon his wife had immediately consoled the boy by telling him that his father was very mean, that he did not need to pay attention to such restrictions and that mother understood and would fix things all right. The father concluded, "If I interfere further and try to help the boy really to amount to something or try to correct some of these other faults, it wouldn't be long before I'd actually be thought of as a terrible person." The attitude of the mother toward all this was that if she did not console the boy he would think he had no one to help him. Actually she is much afraid that, because the father can do so many more things than she can, the child will like his father to the complete exclusion of herself.

Clinical workers often find instances in which the adjustment of the parents to each other lacks a frankness or a tolerance, with the result that each seeks an insidious way to gain the favor of the child. Occasionally this has gone even further, and one finds a parent using the child as his sole source of emotional satisfaction, a condition which never augurs well for the future adjustment of the child or for the welfare of the family. A little more frankness between parents and a discussion of their mutual feelings and fears and their attitudes and ideas about the children may be a real help to all concerned. It will at least aid in overcoming tendencies to contest for the favor and affection of the child, a condition which the child is always quick to recognize and which he does not hesitate to use to his own advantage.

[NOTE.—In the June HYGEIA, Dr. Rademacher will present another article on child psychology and parent traning. His subject will be "Partiality to Children."]

Century-Allen

In order to win the child's favor, he constantly bought candy, ice cream and gifts.

A Housewife Looks at the Committee on Foods

By Doris W. McCray

VIII. *Committee Acceptance of Sieved Vegetables*

TEN YEARS AGO, when the doctor ordered spinach for my baby, I bought some which appeared fresh and crisp, trimmed off the choicest leaves, washed them many times, cooked them and rubbed them through a sieve which had been boiled with the nursing bottles. In the spring of the year I planted spinach near the kitchen door, but several factors were beyond my control; the seed and the soil were not the best, and my spinach crop was a negligible quantity. Of greater significance was the fact that the usual home facilities for the cooking and sieving of vegetables subject the vegetables to a destruction of vitamin C content by exposing them to the air and thus causing oxidation and a consequent loss of vitamin C.

Later the doctor ordered sieved carrots added to my baby's diet. Cooking the carrots in only a little water caused them repeatedly to become scorched; the odor of burned carrots became quite familiar those days. Some of the baby's vegetables were prepared in the pressure cooker, which is better for vitamin conservation, but often I would forget the cooker because of the many demands which baby made on my time. Although I had been trained to be a dietitian in a hospital, I found that one wee bit of humanity was requiring hour after hour of concentrated labor that was leaving me utterly fatigued at the end of the day. Fortunately for mothers today the work of preparing vegetables, soups and cereals for babies and invalids is done in canneries. A mother should choose the brand of food which in every respect offers the highest nutritional values. The work of the Committee on Foods of the American Medical Association in considering and accepting brands of commercially canned sieved vegetables is an invaluable guide in making this choice.

The physician often recommends sieved vegetables for infants, children, convalescents and for the sick who require special diets. The fiber of the vegetable is more easily handled by the digestive tract when it has been comminuted by some process such as sieving, straining, grinding or pulverizing.

The best home cooking method is not as efficient as the best commercial practice in preparing sieved vegetables. This is true because many companies are able to carry on research to discover improved methods and to check on them from a nutritional standpoint. The best commercial canners maintain splendidly equipped laboratories, employ highly trained chemists, biochemists and nutritionists, and maintain fellowships in various universities.

The preparation of sieved vegetables is of greater importance than the ordinary canning of foods for normal persons, since babies and sick persons, for whom they are especially intended, are liable to be upset easily by foods. High nutritional value is a necessity, since the amount of the vegetable fed is small and is depended on to furnish the vitamins and minerals so essential to the proper nutrition of the infant or patient. Doctors, dietitians, nurses, mothers and persons who need special diets look to the American Medical Association's Committee on Foods for assistance in making right selections of the many commercial brands of food which taste, smell and appear similar but which may differ widely in nutritional value. Various phases of the Committee's work will be discussed in relationship to the selection of sieved vegetables.

A Committee decision reads as follows:

> Sieved fruits or vegetables prepared for the feeding of infants and children or for other special diets shall retain in highest degree possible with the most efficient available manufacturing methods the vitamin and mineral content of the raw fruits or vegetables; products with materially reduced vitamin or mineral content shall bear appropriate and prominent declaration to that effect.

The Committee on Foods requires definite information regarding the methods of handling, preparation and processing of the vegetables in order to find out whether the vitamin and mineral content are reduced sufficiently to require a declaration of that fact on the label.

Vegetables must be held at proper cold storage temperatures if they are not canned immediately. If vegetables are stored or canned before they are sieved and packed, proper precautions must be observed in order to avoid considerable vitamin destruction; if this has occurred, it must be declared on the label. No frozen or dried vegetables are used for preparing accepted products.

Further information required by the Committee is contained in the following decision:

> Added salt or sugar in sieved vegetables or fruits intended for infant or invalid feeding or for special diets shall be given appropriate and prominent declaration. This information may be of importance to physicians prescribing their use.

Some companies, not satisfied with meeting minimum requirements, have continued to make their products better and better, and I shall outline some of the special procedures in packing vegetables which are finer for babies than any that could be prepared in a home kitchen.

A special study is made of the seed and soil used in the production of the vegetables. The deepest yellow carrots and the brightest green string beans are richer in vitamin A than those having less color. Crops are grown under contract, and a field inspector sees that they are properly handled, harvested at the right stage of maturity and delivered to the cannery at a time when they may be canned immediately. The vegetables are trimmed, washed, sorted, cooked, mashed, put through a perforated metal sheet, sealed in cans and cooked. From the time that heat is first applied until the vegetable is sealed in the can, it is kept in an atmosphere of steam to avoid discoloration and to protect the natural vitamin content. Vacuum cooking prevents oxidation which is destructive of vitamins.

Regarding vitamin claims in food advertising, the Committee decision reads:

> Indefinite or general vitamin claims are vague, noninformative and misleading and do not permit a distinction between foods as sources of the respective vitamins. Vitamin claims shall stipulate the specific vitamin or vitamins present. Vitamins present in a food in insufficient quantity to contribute in any significant manner to the respective vitamin value of the diet do not warrant mention. It is desirable that warranted vitamin claims be expressed in appropriate terms indicative of the relative potency of the food as a source of the vitamins in the dietary schedule. Foods may be considered relatively as fair, good and excellent or rich sources of vitamins.

Relative distribution of the vitamins in the various foods is presented in tables by Sherman (Chemistry of Food and Nutrition, Ed. 4, 1932), by Rose (Foundations of Nutrition, 1933) and by a committee appointed jointly by the Lister Institute and the Medical Research Council of England (Vitamins: A Survey of Present Knowledge, 1932). These tables should serve as a guide for comparative vitamin claims for foods in advertising.

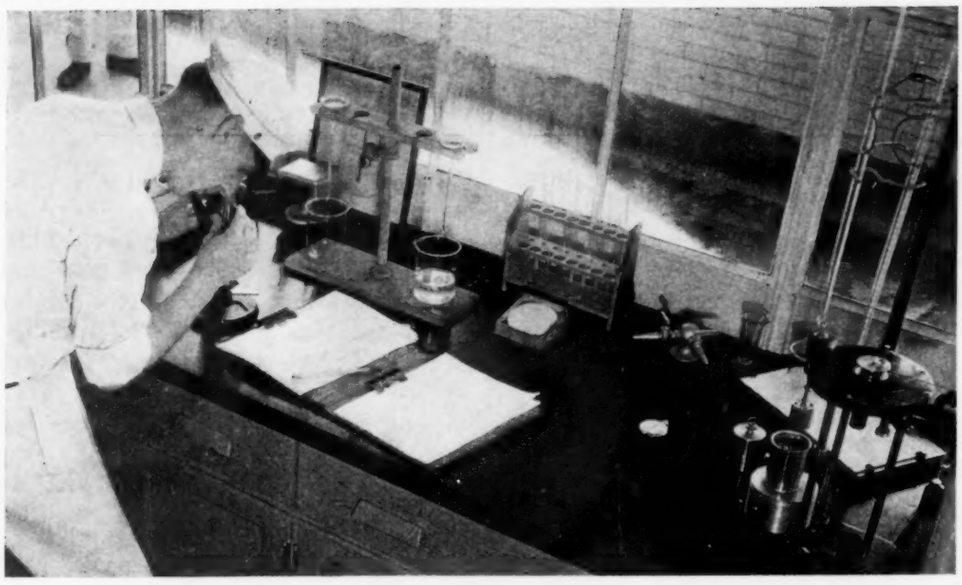
Vitamin A is designated as the antiophthalmic vitamin, since animals deprived of this vitamin acquire an affliction of the eyes; insufficiency of vitamin A is associated with night blindness. This vitamin is one of the essentials for growth.

Insufficiency of vitamin B causes beriberi, a paralysis resulting from the effect of the deficient diet on certain nerves. Loss of appetite often indicates an insufficiency of vitamin B in the diet. While it is incorrect to say that vitamin A promotes growth and vitamin B improves the appetite, these effects may be possible when the general diet is improved.

Vitamin C is the antiscorbutic vitamin, and slight deficiencies which do not result in scurvy may affect tooth structure, although it may be difficult to differentiate between an insufficiency of vitamin C and general malnutrition.

Insufficiency of vitamin D causes rickets, since this vitamin is necessary for the efficient utili-

The vegetables are carefully sorted and inspected before being washed.



In the control room the finished product is carefully analyzed to determine its consistency.

zation of calcium and phosphorus in the body. Bowlegs are often a characteristic of this deficiency.

There is no vitamin F in the vitamin alphabet now, because the vitamin that was first called F is now called vitamin B. Insufficiency of vitamin B (known to the English as B_1) causes polyneuritis in animals and beriberi in man.

Vitamin G, designated in English nomenclature as B_2, is the antipellagric vitamin; its serious deficiency in the diet is associated with pellagra. Much work is being done in isolating and chemically identifying the vitamins, in studying the effect of storage and heat in their destruction, and in studying the amounts of various vitamins necessary for satisfactory nutrition. Diseases resulting from serious deficiency of various vitamins are never found except in cases in which there is starvation or the diet is extremely limited. The ordinary well constructed, diversified diet abundantly supplies the various vitamins with the exception of vitamin D. It has been found that a much larger amount of the vitamins than is needed for weight maintenance is necessary to produce the optimum health and well being which every one keenly desires. The need for all constituents of food is equally important. Often, to improve one's condition of health, one needs to add to the diet greater amounts of one or more of the vitamins and possibly copper, iodine, calcium, phosphorus or iron.

A decision reached by the Committee on Foods, after consideration of the various aspects of the problem from the standpoint of those who read advertising claims, reads:

> Vague or nonspecific "mineral" claims or statements in food advertising may, either directly or indirectly, signify or imply the presence of all the nutritionally valuable mineral elements in physiologically significant quantities in the advertised foods. Such vague statements are not properly informative, are misleading and deceptive and promote bad advertising practices. Advertising should correctly, properly and explicitly instruct the public. "Mineral" claims should stipulate the individual element or elements intended for attention. Elements not present in nutritionally significant amounts in a food and in the quantity of the food likely to be consumed in the diet do not warrant mention. "Mineral" claims should name those elements only which are contributed in substantial physiological amounts by the respective foods in the quantities ordinarily consumed in the diet.

The human body has a definite composition. Although the ratio of composition may vary slightly, it is necessary that the food supplied should contain all the materials that can be assimilated and used. Vitamins act as catalysts or "helpers" in the assimilation of the building materials. Blood also has a definite composition, and when the physician finds that it is not "up to par," a diet rich in building materials is recommended. Teeth and bones have certain compositions, and when there are not enough building materials and vitamins in the diet, the bones may become brittle, break easily or grow crooked instead of straight; the teeth may decay easily. All the minerals found in foods are needed in body building. If a food is rich in iron, it serves a different purpose from one that is rich in calcium, although there is a close relationship between the various minerals needed by the body.

When cans of carrots, peas, spinach, tomatoes and green beans, in the same brand of sieved vegetables, were compared, the can of peas was found to contain the largest amount of phosphorus, the can of spinach the largest amount of calcium and manganese, and the tomatoes the largest amounts of iron and copper. Of course, if you were a dietitian, you would have to know the differences in the composition of the vegetables, how to plan diets and weigh amounts, but if you are a mother, or perchance the wife of a "dieter," you will merely need to follow the doctor's orders and then use housewifely precautions to purchase the best brands. It is possible to choose a sieved vegetable that is all right, except that some of the nutritional value that is supposed to be present is not there. That is why you will look for the Seal of Acceptance in the advertising matter; its presence gives assurance that the nutritional values and the advertising statements have been considered acceptable.

The total solids in a can of sieved spinach may range from 4 to 8 per cent, so that you may

be actually getting twice as much cellulose bulk in one can as in another. The better brands are uniform in consistency, moisture and composition.

Sieved vegetables packed in 4½ ounce cans contain about ½ cupful, or approximately 8 level tablespoonfuls. The 6 ounce can contains about ¾ cupful. The law requires a statement of the net contents on the label.

A Committee decision reads: "Added salt or sugar in sieved vegetables or fruits intended for infant or invalid feeding or for special diets shall be given appropriate and prominent declaration."

These foods are used in diets in which sugar or salt is not allowed. By dilution with milk or water, these vegetables may be fed through a tube in a semiliquid state to patients who lie flat in bed, or they may be given to patients who have diabetes, colitis, ulcers or nephritis or to those who require a smooth diet. To most of us, a bit of salt or sugar merely improves the flavor, but to a person who is seriously ill it may be extremely harmful. Some brands of sieved vegetables are entirely lacking in sugar and contain only a small amount of salt to improve the flavor but less than would be liked by an adult.

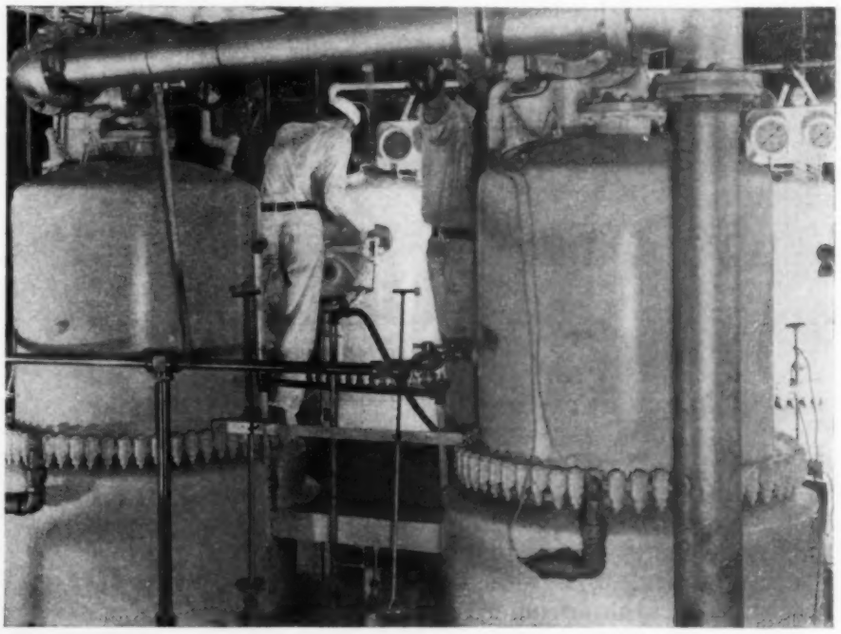
The Committee on Foods requires assurance that the vegetable is prepared by methods which will make it a wholesome food for babies and invalids. You have noticed the smoothness of canned spinach, compared to the usual coarseness of spinach cooked in the home. In the commercial process, the spinach is sorted and inspected before being washed. It is then shaken in a rotating cylinder to remove loose dirt and sprayed under a strong shower of cold water. The spinach next passes into a large rotating cylinder made of coarse screening in which strong sprays of water play on the spinach as it tumbles down the length of the cylinder; it is then run over a long inspection table where women pick off the good leaves, separating them carefully, discarding stems, roots and poor leaves. The good leaves are carried down the table to the washer. One cannery for sieved vegetables is adjacent to a regular canning factory which can make use of some of the vegetables which are not of high enough quality for the sieved vegetables packed for babies.

Care must be exercised that vegetables sprayed with arsenic and lead are not used. The Department of Agriculture has devoted considerable attention, under authority of the Food and Drugs Act, to the control of interstate traffic in fruits and vegetables carrying excessive and dangerous residues of poisonous sprays. Hundreds of shipments have been seized and condemned, and prosecutions have been directed against the shippers. The evidence required has been difficult of presentation because of its technical character. The new food and drug bill now under consideration by Congress provides for establishing legal tolerances for poisonous contaminators of foods.

When I talked with the Secretary of the Committee, he stressed the fact that it is highly important that members of the Committee be thoroughly familiar with current problems in the fields of food manufacture, food chemistry and nutrition, and that is why experts in their fields have been selected for the personnel of this group. For instance, there would be no use in looking for arsenic in bread, because there would be no reasonable possibility in common manufacturing practice of arsenic being introduced into bread. On the other hand, arsenic in sprayed vegetables is a possibility that must be considered.

According to a statement of the Committee on Foods, "Whole grain cereals and vegetables and fruits in general are excellent sources of roughage. Bran itself, not thoroughly softened by cooking, may be irritating to sensitive bowels; the indigestible cellulose of vegetables and fruits is much less irritating."

For babies and invalids, the cellulose of vegetables should be finely comminuted. For normal adults, there is no harm in having the vegetables unsieved. According to the Committee, "Claims that the mastication of specific foods 'keeps the teeth and gums clean and healthy' and equivalent *(Continued on page 473)*



Vacuum kettles allow the excess moisture to be removed while the vitamins are retained.

THE HEALTH EXAMINATION

PARENTS often have an erroneous conception of the purpose of the medical inspector in the public school system. He is not a substitute for the family physician. He will, of course, apply first aid measures to injuries sustained in school; but beyond this the school doctor ought not to play any part in the treatment of illness or in the correction of physical defects. Such care properly belongs within the province of the child's own physician.

The school physician is primarily a public health official, interested in preserving the health of the children in his school. To accomplish this aim he must exercise supervision over the sanitary aspects of the school building in order to insure a healthful environment for the child. He must keep close watch for the presence of communicable disease and take proper precautions to minimize its spread.

A major feature of his work consists in the physical examination of the school child. This examination is made, solely in the interest of the child, to detect any defect that may prove a detriment to health. Notice of the existence of such defects is sent to parents with the hope that early correction may prevent the formation of permanent physical handicaps.

What are the usual defects present in school children and what should parents know about their correction?

Let us suppose that Mrs. Jones receives a notice stating that her son John is underweight. Only too often she sniffs contemptuously, exclaims that the Jones family have always been thin, and does nothing. Or she receives a notice that Mary suffers from malnutrition. "What is the matter with that school doctor?" she says. "Look at Mary. Why, her face is even fat, and he calls her malnourished!" Mrs. Jones disregards the expression of fatigue on Mary's face, the flabby muscles, poor posture and attitude of apathy or of nervous restlessness. And again Mrs. Jones does nothing.

What Mrs. Jones should do is to take John or Mary to her family physician and demand a careful examination of the youngster, disrobed. She should not be content with a cursory inspection of the fully clothed child. In addition, a blood count and urinalysis may reveal significant pathologic changes. It is true that the child of slight bony framework and slender build may be below the average weight and yet be in normal health. Mrs. Jones, however, should not take this for granted. Let her physician assure her that muscular development is normal, that no anemia exists, and that there is no serious impairment of heart, lungs, kidney or other organs. When the actual physical condition of the child has thus been noted, mother and physician should then undertake a careful consideration of the child's habits of life to determine whether the diet is unbalanced or deficient in quality; whether sufficient rest or fresh air is provided, and whether too many stimulating activities outside of school are permitted. Search should be made for factors that produce emotional strain at home or in school. A child in a constant state of apprehension, worry or anger cannot fail to suffer in health.

The least that Mrs. Jones should do is to take suitable measures for the elimination of associated defects that may have been discovered by the school physician, such as decayed teeth or diseased tonsils. These defects may be a menace to health. If she will then take the trouble to visit the school for consultation with the nurse or doctor, she will find them willing to offer advice as to improvement in diet and other factors that make for good health.

Fatigue, malnutrition and underweight frequently result in poor posture, stooped shoulders and flatfoot. The toneless, flabby muscles cannot fulfil their function, and the whole body relaxes. With such a cause it is vain to expect constant nagging to bring the shoulders erect. An atmosphere of nervous tension may indeed aggravate the child's state of fatigue. These children need extra rest, nourishing food, plenty of fresh air and sunshine. The home atmosphere should be placid and pleasant, with a sympathetic understanding of the child's needs.

With improvement in the physical condition it will often be found that the posture also has improved. Exercises to tone up the entire body musculature may now be begun, together with special exercises to strengthen those muscles of the abdomen, back and shoulder which maintain the body in the erect position. Such exercise at

OF THE SCHOOL CHILD

first is best given in the recumbent position, interspersed with proper periods of rest so as to avoid fatigue. In some cases a special abdominal and shoulder support may be of assistance, but only when it is used in conjunction with rest, well balanced diet and suitable exercise.

In the ideal school the department of physical education and the department of medical inspection will work hand in hand to produce and maintain the child in an optimal state of health. In such schools, children with faulty body mechanics will be given corrective exercises in the gymnasium under the supervision of the school physician or an orthopedic consultant. If parents demand this type of health supervision in the schools, they will get it.

The child is a developing organism, ill adapted to stand excessive physical strain. Too often the emphasis of the physical education department is placed on the development of athletic stars and the featuring of competitive sports rather than on a consideration of the needs of the individual child.

Childhood is the ideal period in which to correct flatfoot before it becomes fixed in the abnormal position. Mothers are singularly indifferent to the existence of flatfoot in their children. "His feet don't hurt him; they must be all right" is a frequent comment. When parents do take the defect seriously, they often pursue the wrong remedy. "Yes, the feet are flat. We will get shoes with higher heels." And the weakened muscles and ligaments are put to additional strain by this distortion of the natural position of the foot. In other cases, arch supports, which may or may not fit the feet, are purchased and inserted into poorly fitting shoes. Meanwhile the causes that have produced the flatfoot continue, and the condition progresses.

Flatfoot is due to the weakening of the muscles that sustain the arch of the foot; it is the result most often of muscle fatigue in a foot held in an incorrect position. In the correct position the weight of the body should rest on the outer part of the foot. If the general health of the child is not up to standard, the foot muscles lose their tone just as does the general musculature of the body. Flatfoot occurs frequently in the overweight child because the muscles of the foot are unable to support the heavy load.

The child with flatfoot should first of all be put under a proper hygienic regimen to tone up his muscles. Daily foot exercises will strengthen the muscles of the leg and foot. It may be advisable to raise the inner side of the sole and heel so as to maintain the foot in its proper position or in rare cases to use an arch support; but such methods should be undertaken on the advice of a physician. Only constant maintenance of the foot in the proper position—toeing in—together with faithful performance of suitable exercises will produce a cure. Neglect of the condition will result in future discomfort with all the painful symptoms associated with footstrain.

More than two thirds of all school children need dental care. Because the first teeth are considered temporary, parents too often neglect them. They fail to realize that although the first of the temporary teeth is usually shed at 6 years, the last temporary tooth is not lost until the child is at least 9 years of age and often not until much later. About the time the baby incisors are shed, the first permanent teeth—the 6 year molars—make their appearance. For three or more years these permanent molars will be next-door neighbors of the temporary teeth. Neglect and decay of the first teeth will invariably result in decay of the 6 year molars. It is these molars which maintain the normal relation of the jaws, and it is with these teeth that chewing will be carried on during the period of loss and replacement of the temporary teeth. Irregular teeth and malformed jaws are liable to follow loss of the 6 year molars. Decay, whether of the first or of the second teeth, provides a focus for the growth of harmful bacteria which may be carried into the digestive tract with the food or for poisons which may enter the blood stream.

The child should be taken to the dentist as soon as the primary teeth have made their appearance. At regular intervals the teeth should be cleaned and examined for evidence of decay. After eruption, each permanent tooth should be examined for the presence of fissures that may need repair.

A narrow jaw with irregular teeth is often secondary to nasal obstruction, the chief cause of which is hypertrophied adenoid tissue. Present-day mothers have learned to recognize mouth breathing in their children, and more and more cases are corrected in early life. Parents, however, are less prompt when diseased tonsils are at fault. Mothers will permit their children to suffer one sore throat after another without following up the school physician's suggestion that the offending tonsils should be removed.

About one child in every four or five suffers from eyestrain, but too few of these children are taken to oculists for advice. Mothers often remark that they do not wish their children to wear glasses because it spoils the eyes. Once they start wearing glasses they always have to

BY A SCHOOL PHYSICIAN

wear them." It is true that when an eye with a refractive error is once brought to normal by the aid of lenses, it is so improved in vision that the individual is never again content with his uncorrected bad vision. Failure to wear glasses, however, can only influence the refractive error for the worse. Children who need glasses are handicapped in their school work. The constant effort to see with defective vision may produce a state of general nervousness and predispose the child to reflex digestive disorders.

The child with a squint should have been taken to an oculist long before the school age was reached. The two eyes work together to see a single object only when the image of the object strikes corresponding points in the retina of each eye. When the eye is turned inward or outward, noncorresponding points on the retina are stimulated and objects will be seen blurred or double. To prevent this, one eye becomes functionally blind. The child thus sees an object clearly but will always have an imperfect conception of perspective or distance. Oculists state that at 6 years the child's sense of fusion may thus be totally lost. Exercises to develop fusion sense and glasses to correct eyestrain and muscle imbalance must be provided at an early age to preserve the child's binocular vision.

I should like to mention also the child with congenital reading disability. This disability has no relation to eyestrain or to intelligence and is often associated with left-handedness. It is, as a matter of fact, an innate tendency to read left-handedly, from left to right and to transpose letters. A child handicapped with this difficulty in seeing words and letters in their correct order should be given special training during the first year of school life.

In a recent survey of a group of more than 2,000 children from a typical New England rural district, 13 per cent were found to have hearing defect of sufficient magnitude to warrant report. In many instances the hearing difficulty was unsuspected by parents and school authorities. In a large city on the Atlantic seaboard, where school medical inspection has been in force for almost thirty years, special audiometer studies showed impairment of hearing in one or both ears in more than 2 per cent of the school population. Among the repeaters in the classroom a high percentage of children who are hard of hearing is often found. Children who have difficulty in hearing may be unjustly accused of inattention or stupidity.

Occasionally the presence of hardened wax in the ear canal may dull the hearing; such a simple procedure as the washing out of wax by a physician may restore the normal sensation. The most frequent cause, however, is infection in the middle ear. This is the result of frequent colds or the aftermath of one of the acute infectious diseases, such as measles or scarlet fever. Many of these children are undernourished, their poorly nourished tissues being especially liable to become diseased.

It is important to teach the child to blow the nose properly, holding one nostril at a time or applying the handkerchief loosely to both nostrils. Forcible blowing of the nose, especially during the course of a cold, may drive infectious material into the eustachian tube. At all times it may cause excessive relaxation of the eardrum.

The child who is hard of hearing should be placed under the care of a competent physician. In childhood, when the infection of the middle ear is comparatively recent, there is some hope for its cure or improvement when it is properly treated. In adult life, cure is practically impossible. If the defective hearing is of sufficient severity or of a progressive nature, the child should be enrolled in a lip-reading class so that he may develop the ability to interpret the spoken voice. In many sections of the country there are member branches of the American Federation of Organizations for the Hard of Hearing which are eager to offer facilities and advice to enable the child to lead a normal existence despite his deafness. Plans should be made early in life to train him for a vocation in which his deafness will be no handicap.

In the treatment of any child with a major disability—whether deafness or blindness, heart trouble or diabetes—it is important that this handicap is not made an excuse for withdrawal from life. An effort must be made to cultivate the child's natural abilities; to encourage and, indeed, to expect the child to join in the normal life of the community. He should be trained in suitable projects which may engage his natural skill. His future occupation should be taken into thoughtful consideration early in life. It is mistaken kindness to absolve such children from all responsibilities. There are many instances of individuals who have become outstanding almost because of their early physical disadvantage. Such individuals have been those who have refused to make their handicap an excuse for lying down on the job of life.

Increasing numbers of parents are bringing their children to the physician for examination while they are presumably well. It remains a fact, however, that for the majority of the children who make up the public school population a physician is never consulted except during acute and often only during exceptionally severe illness. The school physician and nurse are often the only agents whose mission it is to watch for trouble while the child seems well and to attempt to forestall it. The physician as well as the parents is interested only in the good of the child. He needs the cooperation of the parents so that he may be helped to make every school child 100 per cent fit—well nourished, keen of sight and hearing, free from dental decay, sound in heart, lung and limb, and mentally and emotionally adjusted to life.

Courtesy Aluminum Company of America

Among the first babies in the world to sleep in aluminum bassinets are these at the Los Angeles County Hospital. There are many advantages from the standpoint of cleanliness, safety, weight and all-round efficiency.

P. and A. Photo

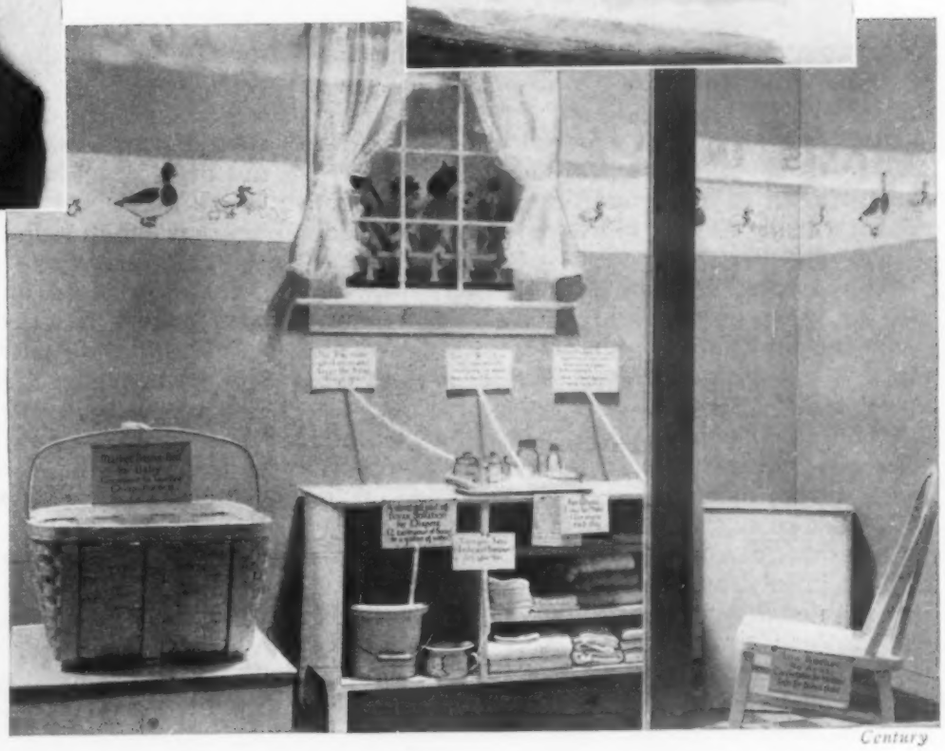
A CHILD IS BORN

In the model at the right, Stirling Calder's "Pioneer Woman" portrays the indomitable, courageous spirit of the pioneer mother.

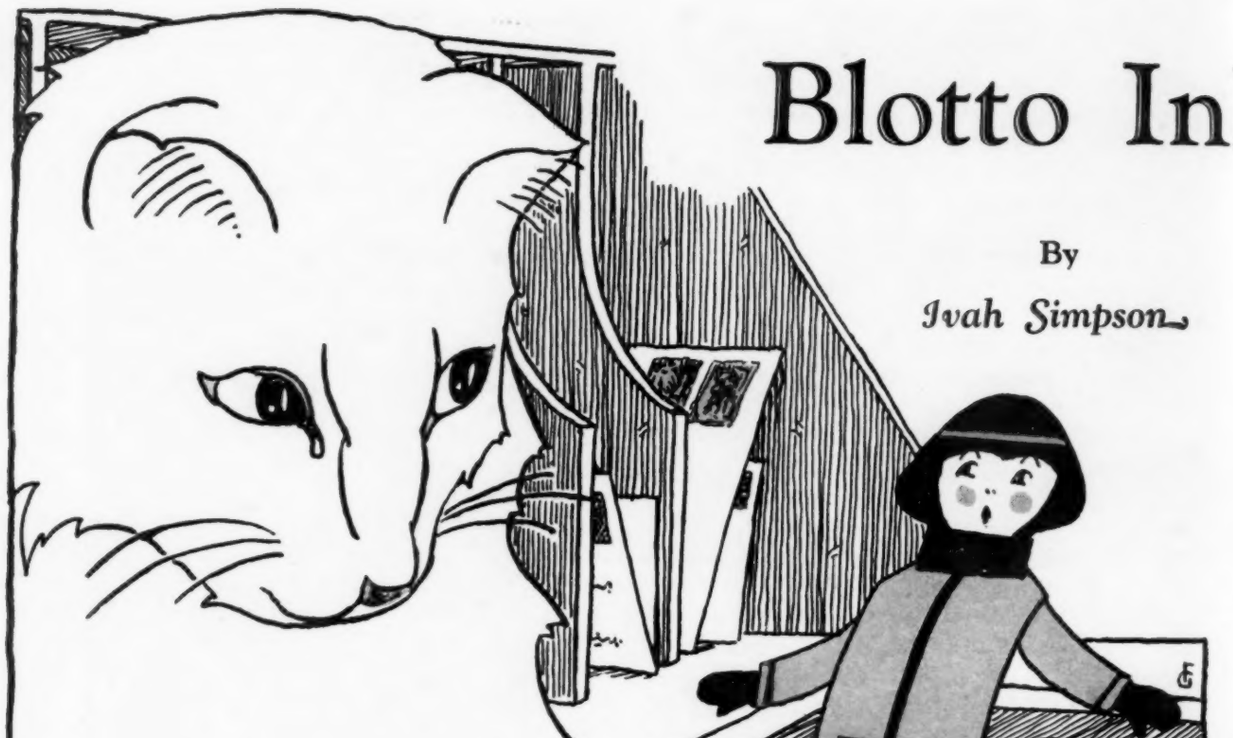
Acme

Mrs. Shepard Krech, above, was recently elected president of the Maternity Center Association, New York, and has charge of the nation-wide Mother's Day Campaign to make motherhood safe for mothers.

The picture at the right shows an exhibit arranged by the Maternity Center Association at A Century of Progress.



Century



Blotto Ink

By

Ivah Simpson

"THERE! take that, and that, and that!" screamed Blotto Ink as he kicked the Washington Monument that stood on Patty's desk. The little monument was only a paper-weight not much taller than Blotto himself; but it was quite strong and heavy, so it stood very straight and did not even budge.

"Oh! oh! my toe!" screamed Blotto, and started to kick the monument again; but even before his foot touched it, the paper-weight went over with a crash and lay on its side.

Then Blotto completely forgot all about the little monument, for right in front of him stood the most frightful creature he had ever seen in his life.

Blotto's eyes opened wide with terror, and he was just ready to shriek aloud when the creature grinned at him good-naturedly and asked, "Can't you be polite, Blotto Ink, and say, 'How do you do?' "

"Why—why," gasped Blotto feebly, "how did you know my name, and who are you anyway?"

"Patty told me your name," answered the strange creature. "Hasn't she ever told you about me?"

"No," said Blotto shaking his head gloomily. "No, she never tells me anything. She never even notices me."

"That's strange," he observed as he lay down on the desk at Blotto's feet. "I don't—"

"Say," Blotto suddenly burst out, quite breathless with excitement, "I know who you are now. You're Patty's automobile."

"Automobile!" yelled the creature in astonishment, and he jumped to his feet.

"Yes, automobile," Blotto repeated quite firmly.

"Well of all things!" uttered the creature in a choking voice. "An automobile!"

"Of course, you must be," argued Blotto, "for you have two big headlights, and while you were lying there in front of me, I could hear your motor running just as plainly as could be."

"Ho-ho-ha-ha-ha!" the creature burst out laughing, and he laughed till his sides shook and the tears rolled down his big fat cheeks.

"I do wish you'd quit laughing," said Blotto in an offended tone, "and tell me who you are then."

The creature sat down, spat on his right front foot, and, when he had carefully wiped the tears out of his eyes with it, announced, "I'm Patty's cat; that's who I am. And my name is Snoopy. She says that name suits me exactly. Do you think it does?"

But Blotto did not say a word in reply. He was looking at Snoopy in disgust.

"What's the matter?" demanded the cat with slightly lifted eyebrows.

"Oh! Oh!" Blotto gasped in consternation. "You spat on your foot, and then you washed your face with it. Ugh! Ugh!" he shuddered. "How could you do such a thing? Don't you know—?"

"Now, listen," broke in Snoopy, "I know exactly how to wash myself. My mother taught me how to do it, and I keep myself clean, too."

"Yes, yes, of course, you do," Blotto admitted, "but—" then he stopped quite suddenly, and a troubled look came into his eyes.

"A baby mouse for your thoughts!" cried Snoopy.

"Mouse!" screamed Blotto. "Where? Where's a mouse?"

Snoopy laughed aloud and replied, "I didn't say there was a mouse anywhere. I merely said, 'A baby mouse for your thoughts.'"

"Oh! Oh!" Blotto stammered in confusion. "I —I don't want the mouse, but I'll tell you what I was thinking about. It was Patty's hands."

"Patty's hands?" repeated the cat with a puzzled look on his face.

"Yes," he whispered, "she doesn't keep them clean."

"No, I know she doesn't," said Snoopy, "and sometimes just after I have washed my fur until it is all smooth and shiny, she rubs her dirty hands on me. I tell you I can hardly bear it."

"What do you do about it?" inquired Blotto earnestly.

"First, I spit at her," Snoopy replied. "Then if she doesn't stop, I scratch her."

"You shouldn't spit and scratch," returned Blotto gravely. "That isn't polite."

"Well," Snoopy demanded sulkily, "what else can I do?"

"I'm sure I don't know," declared Blotto meekly, "but we must think of something. It's terrible," he added with a shudder, "and maybe you won't believe me: but she takes those nice white sheets of note-paper out of that second little drawer over there, and in no time at all that lovely white paper is as dirty as can be."

"Yes, I know," sighed Snoopy. "I often lie up there on that little shelf on top of the desk when she's writing, and I can see for myself that she doesn't keep the paper very clean."

"Clean!" shouted Blotto. "Of course, she doesn't. But that isn't all. You ought to see the big spots of ink she smears all over it. And there certainly isn't any sense in that!"

"You mustn't get so excited," warned the cat. "You'll—"

"Mustn't get so excited!" mimicked Blotto in disgust. "How can I keep from it?"

"I don't see why you should be any more excited about Patty's uncleanly and untidy habits than I am," replied Snoopy flatly.

"Humph!" snorted Blotto contemptuously. "If you'd only use your eyes, you'd see well enough."

"I do use my eyes," protested the cat indignantly. "And every one knows that I can see just as well in—"

"All right," interrupted Blotto, "suppose you use them now; then maybe you can understand why I'm so excited."

Snoopy looked at him carefully and, after a minute or so, said, "Um-m-m, that's queer! You're all togged out in rain-clothes. Yes, sir," he grinned, "you have on a pink rain-coat trimmed in black, a black rain-hat trimmed in pink, and big black boots."

"Yes, you're right," snapped Blotto, complaining angrily. "I'm all dressed and ready for an ink shower, but you can see for yourself there's not a spot on my coat anywhere. No, sir, not one, single, teeny-weeny, little spot."

"My whiskers!" exploded Snoopy in astonishment. "I should think you'd be glad of it. I'd certainly hate to have a lot of dirty spots on my coat."

"Can't you understand anything?" sputtered Blotto. "My name is Blotto Ink, you know, and I'm supposed to blot up ink spots; so, of course, there should be a lot of spots on my coat."

"Oh, yes, I understand now!" cried the cat. "No wonder you're excited. Here you are all dressed up in your shower clothes, and not a drop of ink anywhere."

"You're wrong about that," spoke up a curt voice right behind him. "There's plenty of ink here on this desk."

Snoopy turned around, grinned broadly and drawled, "I didn't know you at first, Inky. I do hope you're well!"

"Instead of trying to be funny," growled Inky Well, "you'd better pick up that paper-weight you knocked over a while ago."

"Yes, do," begged Blotto. "He wouldn't talk to me at all, and it made me so angry that I kicked him as hard as ever I could. I do hope I didn't hurt him."

"Hurt him," laughed Snoopy loudly, "why, you couldn't hurt—" But just then he sneezed, "Ker-choo!" and a pile of papers went flying from the desk onto the floor.

"Grab those papers!" moaned the little monument. "Grab those—" But he stopped instantly; for at that moment, Patty came hurrying into the room, sat down at the desk and turned on the light.

"Um-m-m," she said thoughtfully as she looked about, "I was almost sure that I heard some one talking in here."

"You did," yawned Snoopy who had curled himself into a ball on the little shelf at the top of the desk. "It was the Washington Monument."

"Yes," groaned the little paper-weight, "he knocked me over; then he sneezed and scattered my papers. I couldn't get hold of them, and they all flew away."

"Here they are," said Patty as she picked them up and placed the little monument on them again. Then she said to Snoopy, "You naughty cat, you ought to be ashamed." And she reached over and started to rub his head; but he spat at her angrily, and Blotto Ink yelled at the top of his voice, "Don't you touch him! Don't you touch him! Your hands are dirty!"

"Why! Why!" she gasped in amazement. Then she tossed her head indignantly, reached into the second little drawer of the desk, drew out a sheet of note-paper, and placed it in front of her.

But the queerest thing happened! The note-paper began to inch away from her and said quite crossly, "Go wash your hands." And all at once every creature there began to shout, "Go wash your hands! Go wash your hands!"

She looked at her hands, drooped her head in shame and without a word got up and went quickly out of the room. In a few minutes, however, she came back with a smile on her face and sat down again at the desk.

The note-paper looked at her hands and smiled in approval. He moved over quickly, sat down right in front of her and said, "Thank you, Patty. Now I shall be glad to have you write on me."

She dipped her pen into Inky Well and began to write, but halfway down the page, a big drop of ink slid off of the pen, and said, "Kersplash!" as it dropped onto the clean white paper.

Patty burst into tears. "What shall I do!" she moaned. "What shall I do! I washed my hands, and I was trying so hard to keep this nice paper clean."

"Pshaw!" said a soft little voice right at her elbow. "I can fix it for you."

"Why, Blotto Ink!" she cried in surprise. "Of course, you can. I had forgotten all about you." Then she picked him up and put him down gently on the paper, and sure enough, nearly every bit of the ink was absorbed by his shower-coat.

"There!" he shouted triumphantly. "It hardly shows at all, does it?"

"Indeed, it doesn't," she replied, "and thank you so much, Blotto, dear."

"Oh, that's all right," he laughed gaily. Then after a few minutes he said wistfully, "I do wish you'd remember that I'm always here, ready and willing to take care of those old ink spots for you."

"Don't worry, Blotto Ink," she whispered, "I shall never forget you again, and I shall not forget to keep my hands clean, either."

"Hooray! Hooray!" shouted the note-paper and began to dance.

Then suddenly every creature on the desk was shouting in unison, "Hooray! Hooray! Patty's going to keep her hands clean."

And after that, Patty did keep them clean; for, of course, she wanted every one to be happy.

How to Make Blotto Ink

HOW would you like to have Blotto Ink on your desk to take care of ink spots for you? You can make him quite easily, and he will cost nothing except the time spent in making him; for, you see, he is made of blotters, the kind that are given away as advertisements.

The little fellow as shown here is made of three pink blotters, 5¼ inches long and 2 inches wide, and two black ones, 6 inches long and 3 inches wide. But of course, larger blotters may be used, and they may be of whatever color you like best.

To make Blotto's head, cut a piece like figure 1 from one of the black blotters and a piece like figure 2 from heavy white paper. When you have painted a face on the white paper with your colored crayons, paste this paper smoothly and evenly on the black blotter.

The rain-hat is made of black blotters and has two parts, the front, figure 3, and the back, figure 4. When the front of the hat has been arranged and pasted in place on the head, the other part (fig. 4) is then pasted over the back of it to cover up all rough edges.

Three pink blotters are used for the rain-coat: one is used for the front of the coat, one for the back of it, and one for the sleeves. If the blotters have printed matter on them, be sure to place the printed sides together when you cut these parts for the coat.

Cut two pieces like figure 5. One is the front of the coat, and the other is the back. For each sleeve, cut two pieces like figure 6; that is, for the two sleeves cut four parts.

From black blotting paper, cut a band of trimming (fig. 8) for the front of the coat; two pockets (fig. 9); a pair of mittens (fig. 10); a pair of boots (fig. 11), and two collar pieces (fig. 12).

Now you have all the parts cut and are ready to paste them in place; but be sure your hands are clean and that you have a clean cloth at hand to smooth down your work.

Most of these parts are pasted to the front of the rain-coat; so for the time, lay aside the back of the coat and the two collar pieces.

When you have arranged and pasted the band of black down the front of the coat, and the pockets in their proper places, paste the head on the underside of the coat front at the top, and the boots on the same side at the bottom.

Each sleeve, you know, has two parts; so first paste the mittens on the under side of the front pieces as in figure 7. Then paste the back parts of the sleeves to these front ones, turning all printing inside. Now, arrange and paste the sleeves in place on the under side of the coat front.

When the head, arms, legs, pockets and trimmings are all in place, paste the back of the coat to the front, with the blotting side out. This coat back covers up all traces of your pasting and makes the coat smooth and even.

The two parts of the collar are now pasted in place, one on the front of the coat and the other on the back.

And there you have Blotto Ink, all togged out in his rain-clothes, ready for an ink shower.

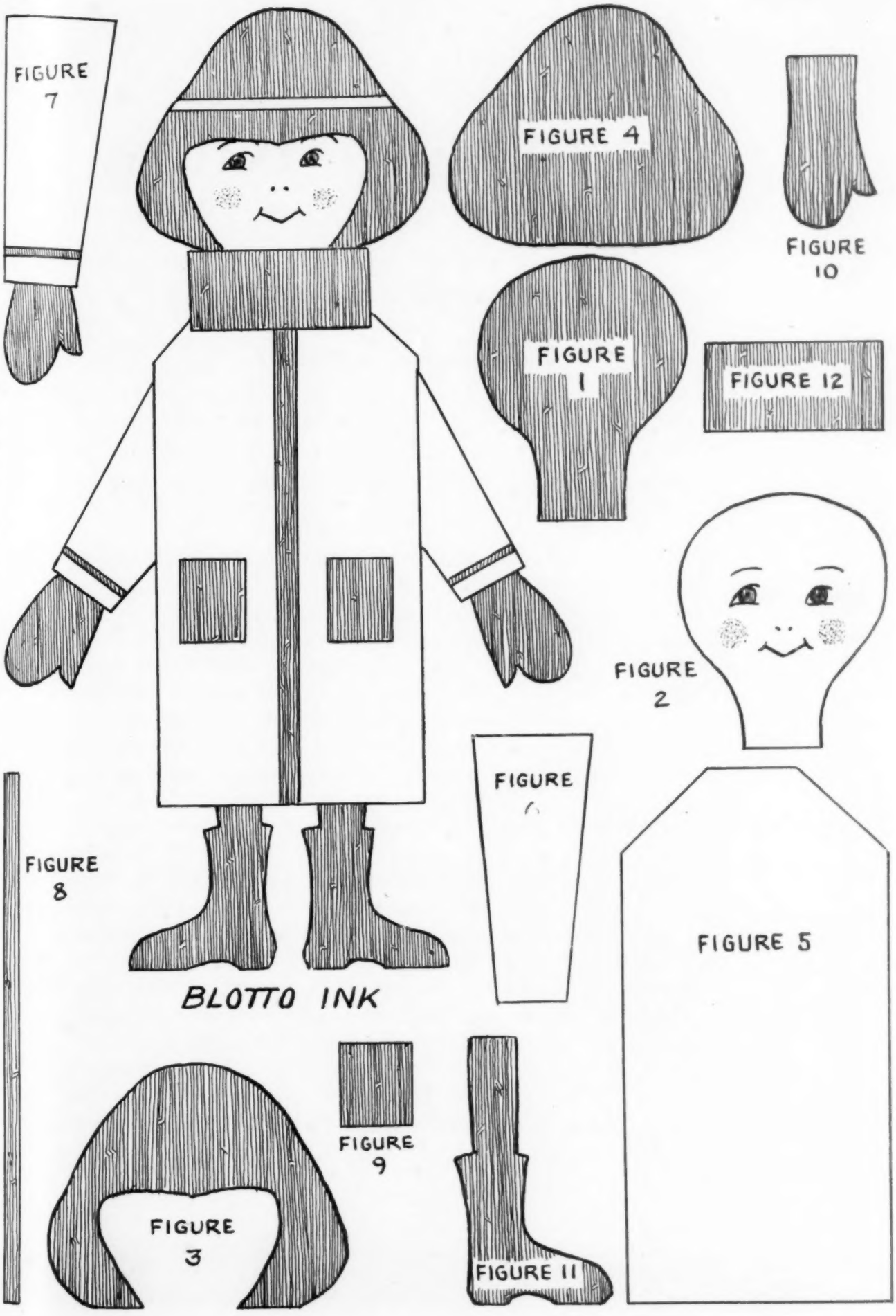


FIGURE 7
FIGURE 4
FIGURE 10
FIGURE 1
FIGURE 12
FIGURE 2
FIGURE 6
FIGURE 8
FIGURE 5
BLOTTO INK
FIGURE 9
FIGURE 3
FIGURE 11

I Want to Know

A FIRST PHYSIOLOGY

By Oscar Reiss
and
Dorothy Walter Baruch

IX

What Happens When You Light the Light and When You Do Some Other Things

YOU HAVE probably at some time needed to get up out of your bed at night and light the light in your room. When this happened, you probably lay in bed and thought, "Now, I have to get up. It's dark. I'll want to see, so I'll light the light." And then, most probably, you have gotten up and have walked straight to the part of the room where the light clicks on; you have found it without much trouble by feeling along the wall a bit with your hand. When your fingers felt the switch, you probably exclaimed to yourself, "Well, here it is," and you moved your fingers in the right way to turn the light on.

What was it in the first place that made you know that the room was dark and that you wanted the light on? And then what was it that made you remember that the switch was in a certain part of the room? What was it that made you able to control your feet so that they would take steps directly to the right part of the room? What made you able to make your hand do what you wanted it to and reach up to the switch? What made you know when you felt the switch that it was a switch and not a dog's nose you were feeling in the dark? And then finally, what part of you sent a message to those

fingers of yours that now at last it was time for them to do their work and to click on the light?

Most mysteriously, but in some way which no one understands, that part of you that is called the nervous system made it possible for you to do all these things.

Inside that hard skull of yours, filling the top and back part of your head lies your brain. In some way, the thinking that you did about needing to get up and the remembering that you did as to where the switch was all took place with the help of that brain.

Inside the back-bone, which runs from your head down your back, lies a groove or hollow space which contains a cord of nerve tissue. This is called the spinal cord, and many smaller grayish white strands run out from this spinal cord. These strands are called nerves. They, in turn, branch and branch into smaller and smaller threads and so go to all parts of the body. In some unknown way, messages travel along these nerves so that when you remembered with the help of your brain that the light switch was in a certain part of the room, messages ran from your brain to your feet and told them to step toward that part of the room. When you had reached the right part of the room, you knew it because your brain works as it does, and messages again traveled down to your hand giving it word to start lighting the light. Your hand in turn was able to feel the switch because of the nerves in your fingers. Messages then went all the way up from your fingers, along the nerves in your arms, to the big nerves in your

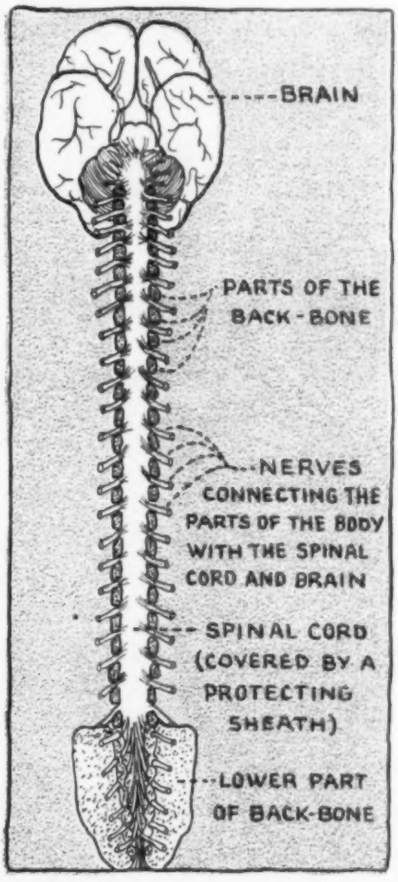
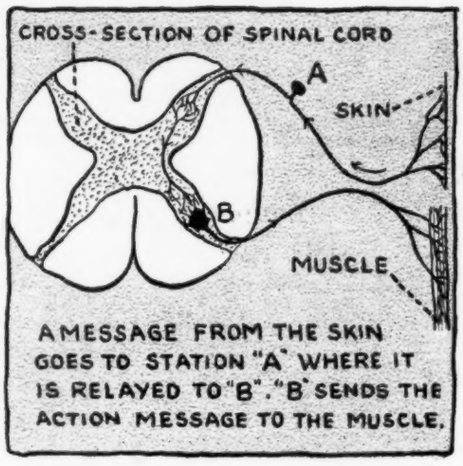

BRAIN
PARTS OF THE BACK-BONE
NERVES CONNECTING THE PARTS OF THE BODY WITH THE SPINAL CORD AND BRAIN
SPINAL CORD (COVERED BY A PROTECTING SHEATH)
LOWER PART OF BACK-BONE

Diagram of the back-bone, which runs from your head down your back.


CROSS-SECTION OF SPINAL CORD
A
SKIN
B
MUSCLE
A MESSAGE FROM THE SKIN GOES TO STATION "A" WHERE IT IS RELAYED TO "B". "B" SENDS THE ACTION MESSAGE TO THE MUSCLE.

Many small substations for sending messages lie along the spinal cord.

spinal cord, and up to the central station in your brain. In the brain the message probably registered something like this, "Here's the light switch, right here." And then quicker than lightning, messages went down from the brain, down the spinal cord and out to the fingers for them to switch on the light.

All kinds of messages are continuously traveling along the nerves. When you look at a great black engine tearing by, a message goes from the nerves in your eyes up to your brain, and your brain registers, "That's an engine. It's black. It has six wheels." The engine whistles. Messages go from the nerves of your ears to your brain, and your brain registers the shrill sound, so that you are conscious of hearing it. Perhaps you are standing a bit too close, and you feel a great wind in your face. Messages go from the nerves of your face to your brain, and your brain registers, "Too near. Better stand back." Then messages run down to your legs and feet to move a few steps farther away from the train.

As you can see, the brain serves as the central station for receiving and sending messages. There are other, smaller stations though, for some sorts of messages. These substations are called ganglions. They are found in certain locations all over the body. Many of them lie along the spinal cord. Suppose when you turned on the bath water and put your finger under the spout to find out how warm it was, it happened to be very hot. The message that the hot water is hurting your finger would race along the arm nerves to the spinal cord, and another message to jerk the finger away would race directly back.

Of course, a message might also go up to the brain about the hot water so that the brain would help you to

be more careful next time; but the jerking away would have been done anyway without the help of the brain but with the help of the spinal cord alone.

Another kind of message, too, is sent within the body by a special part of the brain. Messages of this kind are the automatic messages that control the blood vessels and organs like the lungs and heart and stomach. They travel over different nerve strands called automatic and sympathetic nerves. For instance, when we pick up, or even look at, a delicious candy, messages go down to the stomach to get ready to pour digestive juices over the candy, and the stomach starts the juices flowing before the candy ever gets there. We are not at all conscious of these automatic messages, however, as we are aware of the other sorts of messages that have to do with feeling and seeing and hearing and smelling and tasting and moving.

If it were not for our brain and nerves we could not see anything, we could not hear anything, we would not be able to taste or smell or feel whether things were soft or hard or rough or smooth. We would not be able to recognize people or things. We would not know that a mouse was a mouse and not an elephant, or that a carrot was good to eat and that a piece of mud was not. We could not move about as we wish or do the things that we want to do. We would not be able to learn to read or to write, nor would we even be able to learn to do such simple things as buttoning our clothes. We would not be able to talk. We would be very much like plants that just grow without sense, without sight, without sound and without being able to move about and to go here and there.

Without our brains and our nerves we would not be human beings, and living would not be nearly so worth while.

Jean, John and Jerry will appear again in the next issue of HYGEIA. On completion of the serial, "I Want to Know" will be published in book form by Harper and Brothers.

NEW BOOKS ON HEALTH

[NOTE.—Books reviewed or mentioned on this page, other than those published by the American Medical Association, should be ordered from booksellers or direct from the publishers. They may not be ordered through HYGEIA or the American Medical Association.]

MENTAL HYGIENE IN THE COMMUNITY

By Clara Bassett. Cloth. Price, $3.50. Pp. 394. New York: The Macmillan Company, 1934.

THE AUTHOR of this book is a consultant in psychiatric social work of the National Committee for Mental Hygiene. After pointing out the place which mental hygiene holds in the great medical scheme and showing its relationship to nursing, the author discusses the social service agencies and the point of view of the law in relationship to delinquency. Attention is then turned to the work of the parent and the handling of the preschool child. Following this, the most extensive section of the book deals with the work of the school and the teacher; sections on the church and industry follow. The book concludes with a chapter on recreation and a consideration of psychiatric institutions and agencies. There is also a good index. The volume may be taken, therefore, as a presentation of the complete picture of the relationship of mental hygiene to community life and as a survey of the available facilities and status of this work in our country today.

MORRIS FISHBEIN, M.D.

A CITY SET ON A HILL

The Significance of the Health Demonstration at Syracuse, New York

By C. E. A. Winslow. Published for the Milbank Memorial Fund. Cloth. Price, $3. Pp. 367. Garden City, N. Y.: Doubleday, Doran & Co., Inc., 1934.

THIS IS a report by Dr. C. E. A. Winslow of a health demonstration carried out in Syracuse, N. Y., under the auspices and with the support of the Milbank Memorial Fund. It has previously been said in these columns that cognizance of the attitudes of those outside of medicine who set themselves forth as critics and reorganizers of medical affairs is fundamental in any evaluation of their statements or of their work. The tenor of this volume is a plea for greater state expenditure of money derived from taxes for the care of the public health. This idea is still further emphasized in the introduction to the book by Homer Folks.

With a proper understanding of the attitudes concerned in the demonstration, physicians will be able to evaluate the facts set forth by Dr. Winslow.

M. F.

NATURE, M.D.: HEALING FORCES OF HEAT, LIGHT, WATER, ELECTRICITY AND EXERCISE

By Richard Kovács, M.D. Cloth. Price, $2. Pp. 181. New York: D. Appleton-Century Company, 1934.

THIS VOLUME deals with the use of heat, light, water, electricity and exercise in the treatment of disease. It is not planned as an aid to patients in treating themselves but rather as a means of informing them as to the nature of the methods concerned, the possibilities, the methods of preparation of different types of apparatus and the theory behind the use of these methods. The author has had an extensive experience in physical therapy, and he writes in a manner that any one can understand. A knowledge of physics and chemistry is not required in order to obtain the information that he provides. His book is furnished with a good index.

M. F.

HOW TO CARE FOR THE BABY

By Violet Kilway Libby. Cloth. Price, $1. Pp. 110. Washington, D. C.: The Plymouth Press, 1933.

THIS BOOKLET on infant care is a concise compilation of instructions which may be used to supplement the advice of a physician. The charm and value of the book lie in its brevity and clarity. The technical terms have been avoided, and no attempt has been made to write a medical treatise. The author has attempted to give the new mother some of the practical knowledge she would probably learn through her own experience by the time she acquired her second baby. The book accomplishes this modest purpose well and is recommended for both the bewildered new father and mother until they can make original contributions to the subject of infant care.

H. G. PONCHER, M.D.

MYSTERY, MAGIC AND MEDICINE

By Howard W. Haggard. Cloth. Price, $1. Pp. 192. Garden City, N. Y.: Doubleday, Doran & Co., Inc., 1933.

ANY ONE who is familiar with Dr. Haggard's previous literary efforts will probably, on the past merit of the author, purchase this book. The fascinating story of the rise of scientific medicine from mystery and superstition is told in a masterly fashion in this concise treatise. The book is not a chronological exposition of medical events. The author traces the development of ancient medicine as an expression of a philosophy that grows from the natural reactions of all ignorant men placed in hazardous surroundings to the modern ascendency of scientific medicine. The contributions of various social forces and civilizations are authoritatively recounted. In the rise of scientific medicine from its natural heritage the aid of practically every agency of society has been enlisted, even, as the author points out, to the participation of the individual citizen. The layman, therefore, should know the part he has played in the struggle against disease. The book is generously illustrated, and throughout the text the author has included biographic gems of some of the outstanding scientists and a full glossary of words and names so that the story is clear and forceful. This is a concise classic on medical history and deserves a place in every one's library.

H. G. P.

SCHOOL AND HEALTH

A Department Conducted by J. MACE ANDRESS, Ph.D.

67 Clyde Street, Newtonville, Mass.

Choose Highest Motive That Will Work

EVERY TEACHER is looking for results. As an outcome of her teaching she expects her pupils to learn to think, feel and act in ways which are conducive to the highest aims of education. The health educator is interested especially in that kind of behavior which is concerned with physical and mental health.

If she is a progressive teacher, she begins to take into account the health needs of the children as soon as she enters her classroom in September, and she makes a general survey of the equipment of the school and the resources of the homes and the neighborhood. She hopes by the end of the year to work changes in the behavior of her pupils so that they may form health habits, wholesome attitudes and keen interests in healthful living. There is a wide gap between her dreams for the end of the year and the definite reality which she faces. It is so wide that she can scarcely expect to bridge it completely, yet her success or failure depends on her influence in getting bridges built. How is this to be accomplished? This is a long story which can be but briefly sketched in the School and Health Department for this year. One thing is certain. This adventure has something to do with what is called the motivation of the pupils.

These springs of action are variously called by such terms as motives, urges, drives, wants, incentives, impulses, interests and purposes. All psychologists are agreed that motives, or the springs of conduct, have to do with actual needs to which the organism is sensitive. If one could picture any child that is in a state of complete satisfaction, one that is not sleepy, tired, hungry or thirsty, one without any cravings whatever, that child would be lifeless. But as soon as the scene changes and children become hungry, curious, or eager for social approval, action results. One of the most significant things in the artistry of the teacher is to find motives that will work. This often involves getting children to do things in which they are not fundamentally interested. John, for example, has almost no interest in maintaining good posture. The problem of the teacher is first to lead John to want to improve his posture and then to guide his training. To do this she must make the improvement of posture the basis of satisfying some want. Although John is not apparently concerned with his posture, he is interested in having a good personal appearance. Up to this time he has not realized his defects. When he sees his own shadowgraph on exhibition surrounded by others that are much better and when he hears the other boys talk about the improvement that they hope to make by the next time the shadowgraphs are made, he becomes keenly interested in posture improvement. As soon as he gets into this state of mind, it is an easy matter to give him instruction and training.

Dr. H. L. Hollingworth has well said that motives are irritants. They are so unsatisfying that they attempt to work themselves out so that satisfaction results. A common mistake in teaching is to believe that motives have similar values, that if they result in action, if they get things done, they perform their work. This is not true. It is obvious that if the teacher is to get action she must at times present motives that have immediate value because a higher motive will not work. The history of the school shows that over many centuries fear was the motive most in use. If the child did not study he was threatened with corporal punishment. The fear became so great that finally he responded as the teacher desired. Such a procedure does not insure an interest in the activity itself or any desire to continue. Often there does not seem to be any natural relationship between the punishment and the situation. Rivalry is another kind of motive that is objectionable, because only relatively few pupils can be successful; the others experience failure.

The most satisfactory kind of motive is one that leads the child to action without any outside pressure. If lessons or situations are presented so that children like to solve them and like to do them to help other people and if the problems lead to happy successful living, they are bound to be worth while.

The special contributors to the School and Health Department of this number of HYGEIA have had much valuable experience in the motivation of children in health education.

Textbooks Are Coming Back

THE TIDE has turned. The book famine which has had such a devastating effect on the work of teachers and the learning of boys and girls is passing. The school authorities throughout the country have quite generally adopted the firm resolution that pupils must be reasonably supplied with textbooks.

When the depression hit the schools, the allowance for school textbooks was one of the first to be attacked. Sometimes this part of the budget was entirely eliminated; invariably it was reduced to the point where hardship for teachers and pupils was inevitable. As the number of children in the schools increased, the textbooks became fewer and shabbier and dirtier, so that often effective teaching was well nigh impossible. I have known of some schools where the scattering fragments of textbooks were held together by rubber bands. Think of the deadening psychologic effect on a child who approaches a subject for the first time when a mass of such junk is turned over to him. In contrast, imagine the zeal and enthusiasm with which children open new books or those that are neat and clean and in good condition. Such books are so attractive that they often stimulate children to want to know about their contents. Thus both learning and teaching may become a joy.

The dearth of textbooks has been a great handicap to good teaching. American textbooks are justly praised. They are undoubtedly the best in the world. In them there is not only rich content, but many vital suggestions for thinking and doing are to be found within their pages. In spite of all that has been said about the personality of the teacher, it is still true that the average teacher must lean heavily on the textbook. The vast majority of teachers have neither the time nor the ability to carry on without them. Children must get most of their knowledge and fundamental conceptions in school from the books that they study.

Although so much has been said about the cost of textbooks, recent studies show that such an expense is only 1 or 2 per cent of the total school expenditures. This, there-

fore, explains why the cutting down in school textbooks did not prevent salary reductions as was predicted in some quarters. It has been estimated that wiping out the entire book item from the budget could have prevented not more than a 3 per cent cut in salaries.

Recent conferences of educators and editorials in leading teachers' magazines reflect the increasing demand on the part of teachers, parents and others interested in the schools for more and better textbooks. Recently George F. Zook, U. S. Commissioner of Education, called together a conference to consider the hygiene of handling books in common in schools. It is to be hoped that it will not be long before it will be difficult to find boys and girls reading about health or anything else from dirty, dilapidated textbooks.

The turning of the tide will be a genuine satisfaction to all those who have the welfare of children and youth at heart.

SOLVING HEALTH EDUCATIONAL PROBLEMS

Factors Valuable in Initiating and Guiding School Health Activities

THE PROBLEM OF INCENTIVES

MARGUERITE M. HUSSEY, PH.D.
School of Education, New York University
NEW YORK CITY

THAT WE LEARN to do those things that we want to do and neglect those things that, so far as we see them, have no relation to our interests, is an accepted educational principle. In attempting to secure the educational objective, health, the teacher is faced with the problem of so guiding young people that they will want to follow proper health practices.

Most hygienic practices are not in and of themselves interesting; this is so because they are not immediately satisfying. To many, a frosted chocolate is immediately satisfying, whereas a glass of milk instead may have less attraction. Staying up late at night and going to the movies is intensely interesting, while remaining quietly at home and going to bed early offers few thrills. Could the teacher build interests in all the proper health practices themselves, the task of teaching young people to be self directing in their health habits would be comparatively easy. The problem is to relate these more or less uninteresting proper health practices to things which are interesting to children.

The question then arises as to what are the vital interests and wants of childhood and youth. Certainly they do not lie in health itself, for one's health should not be of vast personal significance. After all, health is only of value as it enables a person to do, to achieve. When this is not so, and health becomes a goal, the health seeker usually becomes neurotic and emotionally invalided.

In studying children, one finds that they are interested in activities of limitless scope and variety. They want to play baseball and play a good game, to play the violin, to solve problems in science and mathematics, to paint, to draw, and so on. It has been found that an outstanding interest is in the field of physical education activities; but in whatever field or fields the interests lie, they can and should constitute a motive for keeping fit.

Is there a relation between these interests and teaching children to follow proper health practices? Undoubtedly there is. Science assures us that the better the health practices of a person are, the better is the level of his health, within the limits set by heredity, and hence the greater is the possibility of success in the various things that he wants to do. Sleeping for an adequate number of hours is related to accuracy in throwing a ball, to playing the violin well, to solving problems. These somewhat uninteresting health practices, then, in reality are related to wants; and if the child is convinced of their significance for him, he will become interested in following them. In the so-called "health instruction" period and in the incidental teaching in the classroom and on the playground, this relationship needs to be constantly brought out. Do I play better when I am not tired? Why? Just how much sleep do I need in order to be fit? Under careful guidance these and many other questions will be asked. The child then feels that he has problems to solve. They are meaningful, and their solution becomes of the utmost importance because of their relationship to his vital interests.

There are other powerful motivating forces. The little child wants to be big and strong. The girl usually wants to be good looking. To enhance her appearance she will often follow the most rigorous regimen of living, provided she is convinced that it will bring about that for which she is striving.

The influence of social approval in molding behavior is recognized everywhere. The disastrous effects of such approval of the thinness fad among girls, late parties, and smoking among high school pupils is well known. This sentiment of the group, if deliberately built, can popularize worthwhile activities and the idea that it is the thing to be fit and follow proper health practices. This can be done best in an indirect manner through gradually guiding the standards of the natural leaders of the group. Every group has its leaders who set the fashion and influence the rest so that what these leaders do, how they think and feel will be reflected to a greater or less extent by their followers. Social approval of health and health practices can also be built in the discussion period, or "health instruction" period.

Every one is interested in what happens to himself and to his friends and acquaintances. Here is the start often for a discussion of various health practices. An "ad" heard over the radio and reported by John, Mary's headache due to loss of sleep, Charles' toothache, the many, many incidents that happen daily at school, as well as other experiences being constantly reported by children, offer starting points since these experiences of themselves are interesting because they are close to the lives of the children. These incidents and

H. Armstrong Roberts

Sleeping for an adequate number of hours is related to accuracy in throwing a ball.

experiences of the group are really problems to be solved. If the relationship of these practices to the vital interests of the various group members is brought out and the members are convinced that following proper health practices will make them more efficient in doing those things that are of importance to them, they will then tend to form desirable health habits. This, then, should be the ultimate aim of teachers.

WATCHING A MOTHER RAT CHOOSE HER FOOD

MAUD A. BROWN
Author and Teacher
LAWRENCE, KAN.

PERHAPS the most maddening impasse in the rocky pathway of health education is the passive unresponsiveness of the high school pupil.

The purpose of this paper is to suggest one way of utilizing the great motivating power of first hand, self directed experience with the causal relationship, which does not necessitate scientific training but can be carried out by the classroom teacher, even though she is untrained in scientific method. The experiment consists merely of giving a pet rat a free-choice dietary. Several trials have indicated that she will do the rest if the range of food selection is sufficiently wide. So loyally have several rats cooperated at various times that I have checked this as a sound and feasible way of motivating health behavior. In each case the rat has chosen her food as though she had listened in on the class discussions of protective feeding and the thirty-seven food essentials.

That there exists among rats, as among men, a wide range of individual preferences was indicated by the strikingly different selection of foods made by several rat collaborators who have from time to time acted as my assistants in teaching health. The last was a highly efficient young mother of nine who was taken off the stock laboratory ration when her brood was 4 days old; a wide variety of foods from which she made a free choice was substituted. She nursed her brood, keeping both them and herself in good condition and even making a small but steady gain herself.

As in the other cases that have come under my observation, the mother rat's choices were quickly and definitely made, and she adhered to them consistently. The following list of foods constituted her chosen menu: egg, white and yolk; leafy vegetables, any kind; crackers, graham, white and rye; apple, orange and carrot; yeast; cube sugar; milk; Postum made without milk.

Her grand passion was for egg. She would snatch it from the hand and touch nothing else till she had eaten her fill, apparently not discriminating between the white and the yolk. She was rarely seen eating the other foods, although they disappeared during the night. She seemed to use milk to supplement the egg, at no time drinking as much as would seem indicated by the needs of nine husky sucklings. The eggs were hard boiled and cut in half. She refused raw egg and seemed disturbed by it, apparently not recognizing it as food. While she enjoyed the other foods of her preferred list and taught her babies to eat them, egg was obviously the source from which she derived her gustatory thrills.

Crackers of the three kinds were eagerly eaten. Yeast also was a prime favorite. She ate it eagerly but in varying amounts; sometimes a whole cake was consumed during the night, and sometimes only a few nibbles were taken. Among the vegetables and fruits her unequivocal first choice was the green leaf. She seemed to enjoy equally all three given—lettuce, spinach and cabbage. She ate apples routinely and nibbled indifferently at orange and carrot, refusing all other fruits and vegetables.

Her choice of beverage was conservative and definite. Of the six beverages provided her, milk, Postum, grape juice, tomato juice, Coca-Cola and "pop," she drank only milk and Postum, the latter made without milk or sugar. It may be that she classified Postum as a cereal because of its taste and odor and therefore considered it an eminently appropriate food and felt justified in substituting it for the grains which were hard to chew. Whatever were her reasons, she remained constant in her preference for these two drinks.

It really was not playing fair with her to offer her yeast and Postum, for the canniest of her tribe could not be expected to have read the yeast testimonials of the foreign doctors and the American society leaders. Nor could she be expected to know that Postum, which she swigged incontinently from the first day and which she taught her babies to drink as early as they could drink at all, was not intended by the makers as a substitute for the whole grain as a food. It is a matter for conjecture whether her rejection of the grains, and she was the first rat of my observation to refuse grains, indicated that she was fooled by the smell and taste of the Postum, and considered her whole cereal duty discharged in a more labor saving and pleasant fashion than by the laborious nibbling of hard grains. The carbohydrate deficiency in her diet, which caused her unusual choice of cube sugar, may have been accounted for in the same way. In nature so much good cereal taste and smell would mean plenty of carbohydrate intake.

The sentiment of the group, if deliberately built, can popularize worthwhile activities and the idea that it is the thing to follow proper health practice.

Just how is one to account for the profound impression that this simple type of demonstration makes on the sophisticated high school senior or the young savage of the early gang era? There is something strangely impressive in watching this untaught little rodent mother select the foods which keep her brood peppy, playful, sleek coated and growing almost visibly, while she herself stays trim and glossy and gains while nursing nine; there is an unmistakable lesson in her deliberate choice of protein, vitamins, calcium and iron, and calories withal. Curiously enough, not the rat, but the teacher and the textbook gain prestige. It may, in the majority of cases, be the first glimpse of the fact that things are in books because they are true, instead of vice-versa.

YOUTH WILL FACE FACTS

LOUISE STRACHAN
Director, Child Health Education, National Tuberculosis Association
NEW YORK

IT IS a curious and interesting fact that precept and practice still keep their distance apart. "Knowledge is power" has been repeated again and again, yet the application of that knowledge to the problems of everyday living seems one of the most difficult things to accomplish.

Tuberculosis is a communicable disease. Every case comes from

another. Health educators talk glibly of "communicable disease control" and agree that prevention is the goal at which to aim. The so-called children's diseases, measles, whooping cough, scarlet fever and diphtheria, are no longer accepted as the inescapable portion of every child. The story of their conquest is a tribute to preventive medicine.

It is not yet possible to say the same of tuberculosis. It is true that the deaths from this preventable disease have been greatly reduced during the past thirty years, but it is still the leading cause of death between the ages of 15 and 25.

Many teachers, health educators included, have a fear of tuberculosis that is totally unjustified by the facts. It is a "hangover" from the days when it was believed that this disease was inherited and inescapable and that to have it meant death. None of these things are true, and they ought long since to have been cast aside with other ancient superstitions. Much is said about the desirable health attitude of "facing facts." Yet the public has been unwilling to face the facts of tuberculosis even though they are positive and joyful facts; namely, that tuberculosis is not inherited and that it is both preventable and curable.

The high school student is more ready and eager to face facts than some of his teachers and supervisors seem to realize. It is useless to hope to reduce the high death rate among young adolescents and adults unless they shoulder some of the burden. "What are you going to do about it?" is a challenge to which they respond eagerly and purposefully.

The growing use of the tuberculin test in schools and colleges offers an excellent opportunity to teach the measures by which this communicable disease, which causes the greatest number of deaths between the ages of 15 and 25, may be controlled. The test is a harmless skin test which shows whether or not a person has ever been infected with tuberculosis. Those who react positively are then subjected to the x-rays in order to disclose the degree of infection and to determine what kind of protective care is needed in each case.

One high school in California carried on a course of instruction on general communicable disease control, using the tuberculin test as an illustration of a public health measure. Bulletins were prepared on the communicable diseases of childhood and adolescence. Among the bulletin topics were Communicable Diseases, Methods of Fighting Communicable Diseases, Measles and Chickenpox, Mumps, Scarlet Fever and Diphtheria, Whooping Cough, Visit to City Health Department, Ringworm, Tuberculosis, Tests for Tuberculosis, Impetigo and Scabies, and A Health Test. All teachers received these bulletins, and plans for the tests were explained in a faculty meeting. A selected group of pamphlets on the diseases to be studied was placed in the library for ready reference. Special efforts were made to enlist the sympathetic cooperation of parents and community. The health coordinator of the high school explained the plan to the parent-teacher association, and a physician, a specialist in tuberculosis, gave a lecture on this disease with special emphasis on the value of the tuberculin test. The local paper had an article about it, and a letter was sent to all parents by the school principal, explaining the tuberculin test and requesting the parents' permission to have their children receive that service. The comment of one teacher on the survey is indicative of its success: "The recent tuberculosis test was more than a success, I feel. The children gained actual and accurate information about the diseases studied, and were able to talk intelligently about them. Real interest was shown by the students in the tuberculosis tests and I feel, as a teacher, that we found a number of students that were in real need of medical attention or of special consideration in physical education or other classes, who we hadn't realized needed such consideration. Those children will truly profit by this experiment." A full description of this interesting undertaking is given in the *University High School Journal* of Berkeley, Calif. (vol. 9, March, 1932).

In a Michigan high school where the tuberculin test was given to the students, the whole community was aroused to take a deeper interest in the control of tuberculosis. The students showed their sense of appreciation for the service itself as well as for a better understanding of communicable disease control. Case histories might be given to show how young lives which might have been sacrificed to a preventable disease were saved, but this is not the place to discuss such matters.

To Contributors:—*Although most of the articles in the column "Solving Health Educational Problems" are solicited, the editor of this department will be glad to consider contributions which deal with concrete and practical health education procedure in the school. Articles must not exceed 1,000 words.*

In Massachusetts, where experimental programs in health education have been carried on in a number of high schools, the interest aroused by students in tuberculin testing has been crystallized in a teaching unit on tuberculosis and its prevention. Here the approach has been from the point of view of what the students already know about tuberculosis. Their confused understanding of the subject revealed the need for further study. Their natural interest in health heroes was focused in a study of Pasteur, who discovered the germ cause of disease; of Koch, who discovered the bacillus which causes tuberculosis, and of Trudeau, the "beloved physician" who introduced the sanatorium treatment of tuberculosis in this country. An appeal to the inborn idealism of youth was also made through emphasis on individual responsibility in the community aspects of this disease. This teaching unit is available in printed form from the Massachusetts Tuberculosis League, Little Building, Boston.

How frequently is there occasion to repeat that ancient adage, "An ounce of prevention is worth a pound of cure!" When the way of prevention is plain for all to see and understand, must tuberculosis continue to be the leading cause of death among young people?

A BIBLIOGRAPHY
for solving health education problems

Advances in Health Education. Report of Health Education Conference, 1933. Price, $1.50. Pp. 305. New York: American Child Health Association, 1934.

Offers a panel discussion on motivation and also descriptions of motivation used in functioning programs.

Claremont Junior High School Health Committee: A Tuberculosis Survey in a Junior High School as a Means of Health Instruction. Article in *University High School Journal*, Vol. 12, No. 4, March, 1933. Price, 50 cents. Pp. 196-209. Oakland: University of California High School.

An illustration of the best use of health instruction opportunities

provided by special health services to students.

Disciplinary Devices—Rewards. Price, 20 cents. Pp. 19. New York: Child Study Association of America.
Presents a symposium of thoughtful opinions.

Hoefer, Carolyn: Methods of Health Instruction in the Elementary School. Chicago: Elizabeth McCormick Memorial Fund.

Maller, Julius B.: Cooperation and Competition. Teachers College Contributions to Education, No. 384. Price, $2. Pp. 176. New York: Columbia University, 1929.
An experimental study in motivation.

Problem Solving in Health Education. HYGEIA: January, February and March, 1933.
A series of articles which show how health instruction was motivated in some rural schools.

Symonds, Percival M.: Basic Principles in the Psychology of Learning. Reprint. Price, 5 cents. Pp. 9. New York: American Child Health Association, 1931.

NEW HEALTH BOOKS
for teachers and pupils

TEACHERS and students of nutrition will be interested in this well written volume on botany which concerns itself with plants useful to man. In contrast to the ordinary book on botany, which contains little of human interest, "Plants Useful to Man" [1] contains many facts relating to the geography, history and use of the common plants. Teachers and students of nutrition will find here something about the history and distribution of the ordinary plants that furnish man with food. Grade teachers of hygiene will find many interesting facts about foods in this book which may be used to supplement the ordinary textbook.

IN THIS careful study of the cause of dental caries, the author finds that citric fruit juices added to the diet will largely arrest and prevent dental caries and gingivitis. Contrary to the beliefs of many students, the author states in "Diet and Dental Health" [2] that both of these troubles may occur in the majority of children who receive daily 1 quart of milk, 1½ ounces of butter, 1 pound of vegetables, ½ pound of fruit and a little less than 1 egg. Relief may be found when a pint of orange juice and the juice of a lemon are added to a diet that is adequate in all other respects. Orange and lemon juice are found to act as a growth stimulus to children.

So much has been said in recent years about the Eskimo's carious-free teeth that Mr. Hanke's explanation of this phenomenon is interesting. He believes that the bodies of the Eskimos may have learned to manufacture vitamin C. He cites the fact that the rat and the guinea-pig both belong to the rodent family. The guinea-pig must get the equivalent of 3 cc. of orange juice each day to avoid scurvy. The rat, however, may go on for generations without the administration of vitamin C; yet it has been found that the livers of such rats contain vitamin C. It seems probable to the author that the law of the survival of the fittest has eliminated those Eskimo babies who could not manufacture vitamin C. He also calls attention to a curious fact known to many dentists and nutrition workers; namely, that a small percentage of Americans remain free from dental disorders in spite of a deficient diet. He hints that their bodies may convert some of the tissue essentials from their food.

There are many remarkable anatomic drawings illustrating the results of this investigation.

It may be a matter of controversy as to whether the lack of fruit juices in the American diet is as responsible for dental disorders as the author points out, but at any rate his observations strongly confirm what has been known for some time—that citric fruits are valuable in the child's diet.

Teachers may render a real service by encouraging children to spend their pennies for oranges rather than for candy.

TEACHERS and students of nutrition will be happy to know that "Food, Nutrition and Health" [3] has again been revised. This makes it possible for one to cover the essentials of the modern science of nutrition easily in one or two evenings. Much new material has found its way into this new edition. As a result of the recent research into foods and nutrition the authors find that the type of diet which consists of meat, white bread, potato and sugar, which is so universally adhered to, is even more emphatically condemned than before. Not only does the book cover the general theory of nutrition but there are many practical specific

suggestions regarding an optimum diet. This is one of those indispensable books that should be owned by or accessible to every teacher who is interested in her own health and that of her pupils.

TWO CANADIAN professors of physiology collaborate in producing "The Human Body and Its Functions," [4] an excellent textbook in elementary physiology. The material has been presented in a simple manner with the use of as few technical terms as possible. Although there are many direct suggestions in the book relating to the care of the body, its purpose primarily is to make clear the working of the human body. For a textbook of this kind, it is unusually well illustrated. It is adapted especially for those studying health nursing, occupational therapy and public health. All teachers of physiology and hygiene will find it an excellent reference book.

BECAUSE of its conflicting theories, psychology is one of the most difficult subjects to approach today. One sighs in vain for a science of human nature that is as accurate and definite as mathematics. Amid the chaos of conflicting psychologies these authors enter the lists as champions for the Gestalt psychology with "Principles of Mental Development." [5] It stands out in sharp contrast to the theories of Thorndike which have been so widely accepted here in America. At times the writers seem to be more conscious that they are participating in a debate than that they are preparing a scientific textbook in educational psychology. Their thesis is that "man is NOT a machine, that the laws of his behavior are the laws of intelligence, will and personality, not the laws of association." The authors have drawn freely on the literature of experimental psychology in giving their interpretations. Whether or not one follows the book to the extent of accepting the Gestalt theory, one will profit by a careful study of this stimulating volume.

1. By Robbins, Wilfred William, and Ramaley, Francis. Price, $3. Pp. 428. Philadelphia: P. Blakiston's Son & Co., 1933.
2. By Hanke, Milton T. Price, $1. Pp. 236. Chicago: University of Chicago Press, 1933.
3. By McCollum, E. V., and Becker, J. E. Third edition, revised. Price, $1.50. Pp. 146. Baltimore: Published by the authors, East End Post Station, 1933.
4. By Best, C. H., and Taylor, N. B.. Price, $3.50. Pp. 417. New York: Henry Holt & Co., Inc., 1932.
5. By Wheeler, Ramond Holder, and Perkins, F. Theodore. Price, $3.75. Pp. 529. New York: Thomas Y. Crowell Company, 1932.

QUESTIONS AND ANSWERS

Sulphur Dioxide in Foods

To the Editor:—Will you kindly inform me whether the sulphur dioxide in cane sugar molasses and in cane sugar is present in sufficient amount to make these foods injurious or undesirable? When the molasses is used to make gingerbread, baking soda then being added with the consequent formation of sodium sulphite, is the sulphite then present in sufficient amount to render the gingerbread in any way harmful? In what form is the sulphur dioxide retained in dried fruits when it is employed by bleaching or to prevent subsequent discoloration and is that amount actually sufficient to be injurious? Is the bleaching agent used in wheat flour absorbed and retained by the flour in sufficient amount to be objectionable?

H. J., Colorado.

Answer.—The American Medical Association's Committee on Foods says that sulphur dioxide in the quantities in which it occurs in cane sugar molasses and in cane syrup products is harmless and unobjectionable. The sulphur dioxide is used to retard fermentation and to improve the color of the cane sugar juice. It is understood that the sulphur dioxide content of the syrups on the market is very small; it usually runs less than from 100 to 200 parts for each million parts of syrup.

Under the Food and Drugs Act no objection is taken by the government to the presence of these small quantities of sulphur dioxide in foods. The government has carefully investigated any possible injurious effect of sulphur dioxide being added to foods. No objectionable digestive or physiologic effects have been disclosed.

The sulphur dioxide in dried fruits is chemically bound with certain organic compounds. This sulphur dioxide in "sulphured" dried fruits also is harmless. The government in all cases requires the label declaration of added sulphur dioxide for foods treated with sulphur dioxide.

Flours treated with bleaching agents now in use in the milling trade are in no way harmful because of the presence of any minute quantities of bleaching material that may be retained in the flour. Assertions that bleached flour is harmful are not based on fact and are merely unscientific statements of hearsay.

No concern need be felt regarding any possible harmfulness of bleached flours or foods treated with sulphur dioxide that are now on the market.

Effects of Removal of Ovary

To the Editor:—If a young woman has an ovary removed because it is cystic or for any other reason, will she ever enjoy good health again? I have heard that an operation of this sort on a young woman had some effect on the nervous system.

J. S. M., New York.

Answer.—If a young woman has only one ovary removed because it is cystic or for any other reason, it is not true that there will be untoward effects on the nervous system and that she will never enjoy good health again. It is true that these effects may follow if both ovaries are removed, though the effects may be minimized by appropriate treatment. A physician must administer such treatment.

Backache

To the Editor:—What causes a 15 year old girl to have pains in the back? They do not seem to have any definite starting point but seem sharpest about the center of the back. Is there any remedy?

I. J., Nebraska.

Answer.—Pain in the back is one of the most puzzling problems with which the physician is concerned, because there are so many possible causes for it. Pain in the back may be due to excessive thinness, and in this case there is a deficiency of fatty padding of the tissues. On the other hand, it may be due to excessive weight which puts a strain on the bones, ligaments and muscles of the back. It may be due to bad habits of standing and sitting or to the use of excessively high heels, any one of which may throw the body out of balance and put a strain on the back. It may be due to infection in the tonsils, nasal sinuses or other hidden parts. In older persons, abscessed teeth may be responsible, but this is not likely to be the case in a 15 year old girl, although it is not impossible. Backache may also be due to conditions in the abdomen and pelvis, such as chronic appendicitis and abnormal position of the uterus. There is no way in which one can tell the cause without a careful examination of the patient. Neither is there any remedy for backache as such. One must find the cause and remove it. Simply treating backache as an ache is useless.

Air-Conditioning in Hay Fever

To the Editor:—I have heard that rooms may be equipped at rather small expense so that the air is filtered to give relief to those who have hay fever due to pollens. Will you tell me more about the apparatus of such a room? Where can it be obtained? Is it easily installed in a home? How much help does it give the patient?

T. W., Idaho.

Answer.—Air-conditioning by mechanical filtration gives relief to sufferers from hay fever during such time as they remain in the filtered air but not after they leave the room. The apparatus is relatively simple, consisting of a filter that will hold back the pollen and an electrically driven fan to force air through the filter. It is installed in a window, and all other windows are kept closed. The air that is forced into the room through the filter escapes through the openings between the sashes of the windows and around the doors. The apparatus is fairly easy to install. It can be purchased through any medical or surgical supply house and can also be procured through electric utility companies, though probably only on special order. The price of the apparatus ranges from around $40 to several hundred dollars, depending on the size of the installation.

If you have a question relating to health, write to "Questions and Answers," HYGEIA, enclosing a three-cent stamp. Questions are submitted to recognized authorities in the several branches of medicine. Diagnoses in individual cases are not attempted nor is treatment prescribed. Anonymous letters are ignored.

Before the Stork's Arrival...

ANXIETY and worry used to precede the stork's arrival. Was everything all right? Would there be one baby or two? These were questions in the mother's mind. Would delivery be normal? What were the physical prospects of an uncomplicated birth? These were problems the physician faced.

But such anxiety is needless now. For with x-rays the physician can secure most important information. From early in the pregnancy to the newcomer's natal day, his development can be watched . . . The mother's pelvic formation can be observed and measured. With such positive visual facts, the physician can act promptly and with certainty.

Whether it is in pregnancy, an illness, or the annual health audit, radiographs play an important part in the examination. They furnish facts which cannot be obtained in any other way, and aid the physician in undertaking prompt and appropriate treatment.

• FREE—a copy of "X-rays and Health," a booklet telling how x-rays can help to keep you well. Mail this coupon today.

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Gentlemen: Please send me a free copy of "X-rays and Health."

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Before the Stork Arrives

MOTHERHOOD richly deserves the most skillful medical care to be had. But, far too often, safeguards which can be provided are neglected. As a rule, when proper preparations for childbirth are made, prospective mothers have little cause for anxiety.

Having the right physician is a great comfort. It means as much to the husband as to his wife to be entirely satisfied with the experience and skill of the doctor who may be called in attendance.

Long before the stork arrives, the doctor will advise about diet, proper rest and exercise, and will make periodic examinations. At regular intervals the doctor studies and records blood pressure, urinalyses, temperature, weight, heart and lung action, and possibly makes tests of the blood. Suggestions about mental attitude may also be given.

When there are no abnormal or disturbing conditions, Nature's processes should not be interfered with. But without hurrying Nature, expert obstetricians can often smooth the way for the modern mother by methods unavailable to her grandmother's physician.

With vigilant and unremitting care on the part of her physician and with her own complete cooperation, the period of waiting should be one of happiness and serenity for the expectant mother.

In many localities clinics give free service to those who cannot afford to employ the regular attendance of a doctor. Maternity Centers and other Health Centers give valuable advice and information without charge. The Metropolitan will send on request its free booklet, "Information for Expectant Mothers." Address Booklet Department 534-Z.

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Do You Know—

1. What the usual physical defects present in school children are and what parents should know about their correction? *See page 446.*
2. When a mother should wean her baby? *See page 406.*
3. The eight most important considerations for the promotion of the welfare of the young mother and her child? *See page 400.*
4. Why a course in practical motherhood is psychologically valuable to the high school girl in the modern system of education? *See page 416.*
5. Why parents' lack of frankness concerning their relationship to their children is an insidious element against the future development of these children? *See page 440.*
6. Why commercially canned sieved vegetables are more suitable for infants and invalids than those prepared at home? *See page 442.*
7. How to distinguish Amanita phalloides, or the "death angel," from edible mushrooms? *See page 435.*
8. What development in the study of the public health problem is receiving most emphasis today? *See page 420.*
9. The type of birthmark, or mole, that is a menace to the health of the victim? *See page 433.*
10. How blood is matched for blood transfusions? *See page 404.*
11. The newest activity of health departments in large cities in relation to foreign travel? *See page 426.*
12. How to apply a successful tourniquet? *See page 398.*
13. In what instances the spinal cord causes a physical reaction without the aid of the brain? *See page 454.*
14. Why preparations of insulin taken by mouth are useless in the treatment of diabetes? *See page 409.*
15. The best time to correct speech disorders? *See page 394.*
16. How many million bacteria there are to each square yard of your dish-cloth? *See page 429.*
17. How to make a simple orthopedic play garment for girls? *See page 419.*

HOUSE-CLEANING IS MERRY FESTIVAL TO MANY PRIMITIVE FOLK

In some parts of the world, house cleaning is not an ordeal or a nightmare or an endurance test. It is a festival, joyous and dignified, and one in which the man of the house takes a worthy part. It is a celebration for young and old for it is a time of ridding the house of spiritual as well as material impurities; demons, ghosts and evil spirits are dreaded more by primitive folk than are dust and dirt, an article in *The Cleanliness Journal* says.

In China, old customs dictate that house cleaning should begin on the twenty-third day of the twelfth moon, or seven days before the beginning of the New Year. The picture of the kitchen goddess is first burned by all the family, so that she may be sent heavenward to report on the family's doings during the year. Then the house is cleaned, and everything is put in order in preparation for the return of the goddess at the end of seven days. On the last day of the year there is great commotion with bathing, shaving, general cleaning, the payment of debts and preparation of food to be finished before a clean picture of the kitchen goddess is installed in the shrine to denote her return to the household.

On St. Sylvester's Eve the people of Trieste, in festive procession, cast the spirits of darkness out of their houses with sticks and brooms.

At Easter time in Calabria, as church bells peal forth the resurrection of Christ, folk sprinkle their houses with holy water, commanding temptation to depart and good to enter in.

May 1, or thereabouts, is the accepted time throughout Central Europe for cleaning houses and expelling witches. In the Tyrol, the last three days of April are devoted to this task, juniper berries and rue being used to fumigate the dwellings.

Superstitious Armenians believe that to sweep at night is inadvisable because it may stir up evil spirits. If, however, one is compelled to sweep at night, one should singe the broom so as to give warning of one's approach. Modern Egyptians also object to night sweeping which may cause some angry jinnee to avenge the insult. The Japanese claim that to sweep on the first day of the year is to throw luck to the winds.

The car to watch is the car behind the car in front of you.—Holyoke (Mass.) *Daily Transcript.*

Vitamins are well retained in Heinz Strained Foods.

Precious Vitamins for Baby

How to be sure your child receives the vitamins which vegetables supply

Do you cook and strain vegetables for your baby? Do you know that ordinary cooking and straining methods lose 20 to 60 per cent of the vitamin content? And that so-called fresh vegetables in the market may be several days old, thus lacking much of their original vitamin value?

Heinz offers you ready-to-serve strained foods—cooked, strained and vacuum-packed by methods which retain a far higher percentage of vitamin content than is possible with ordinary home methods.

Choice ripe vegetables are cooked a few hours after being taken from gardens. In air-tight kettles, they are cooked with dry steam. No precious juices are lost. Then, free from air, they are strained, and vacuum packed into enamel-lined tins.

You will find it extremely easy to feed Heinz Strained Foods even to finical infants, for their fresh flavor and color are well retained.

But, best of all, these baby foods of Heinz, summer or winter, are uniformly higher in vitamin content than are most home-prepared vegetables. They contain the full mineral content of garden-fresh foods.

Be *sure* of your baby's vitamins. Ask your grocer or dealer for Heinz Strained Foods.

Heinz Strained Foods include 8 varieties—Mixed Vegetables, Peas, Green Beans, Tomatoes, Carrots, Spinach, Beets and Prunes.

FREE—DIET CHART

What each vitamin does for your baby, and in what foods each vitamin is found. The functions of each mineral, and how to be sure of having them in your baby's diet. These valuable facts are shown in clear, graphic form on the Heinz diet charts, offered to you FREE. Mail the coupon today.

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57

HEINZ Strained Foods

A Group of the 57 Varieties

BEARING BETTER BABIES

(Continued from page 403)

includes direction in feeding, periodic health examinations, immunization against diphtheria and smallpox, and attention to slight disturbances.

While syphilis often has been blamed for a large number of early deaths, careful tests and analyses have revealed the fact that, although it is responsible for a considerable percentage of stillbirths in the last months of pregnancy and of neonatal deaths, it does not play as dark a rôle in later infancy and childhood as is generally believed.

During the early months of life the infant enjoys a relatively high degree of immunity against some of the infectious diseases. This is lost rapidly toward the middle of the first year, after which the child is highly susceptible to most of the communicable diseases. For this reason, immunization against diphtheria and vaccination against smallpox should be carried out before the end of the first year.

The baby also is exceedingly susceptible to infection with the tubercle bacillus. This may take place either through contact with tuberculous persons in the home or through the ingestion of milk from tuberculous cows. Most cities have a well protected, pasteurized milk supply, so that infection from this source is infrequent. On the other hand, many tuberculous persons are still at large. Mothers must strive, therefore, to keep babies and young children away from any direct contact with those persons. If any suspicion of contact arises, the baby should be given a simple skin tuberculin test, and x-ray pictures of the chest should be taken. Much can be done to fortify the child against a breakdown from tuberculosis by proper feeding, rest, and protection from the other communicable diseases.

Because of the systematic use of cod liver oil and ultraviolet radiation, and the widespread feeding of orange juice and tomato juice, the incidence of rickets and scurvy has been greatly reduced.

I will have failed of my purpose, the promotion of the welfare of the young mother and her child, if this article has not brought home the vital importance of the following points:

1. The selection, early in pregnancy, of a capable physician who has good judgment and obstetric skill.

2. Cooperation of both parents with the physician in every step of the process.

3. Early, systematic, prenatal care continued throughout the entire expectant period, in which a well trained public health nurse can play a large part.

4. Careful hygiene of pregnancy under the direction of a physician and a nurse.

5. Dispelling the notion that every labor should be hastened and that the obstetrician should resort to artificial or instrumental delivery.

6. Especial attention to the nutritional aspects of pregnancy.

7. The best possible care for the new-born baby and periodic attention throughout infancy by a capable physician experienced in pediatrics.

8. Prevention of the acute communicable diseases through immunization when possible.

John Masefield has expressed beautifully the main theme of my article:

"In the dark womb where I began,
My mother's life made me a man,
Through all the months of human birth
Her beauty fed my common earth.
I cannot see, nor breathe, nor stir
But through the death of some of her."

TALLER! HEAVIER!

Children protected against simple goiter are found to be superior in development

ACCEPTED AMERICAN MEDICAL ASSN. Committee on Foods

IODINE, by protecting children from simple goiter, exerts a remarkably beneficial effect on growth.

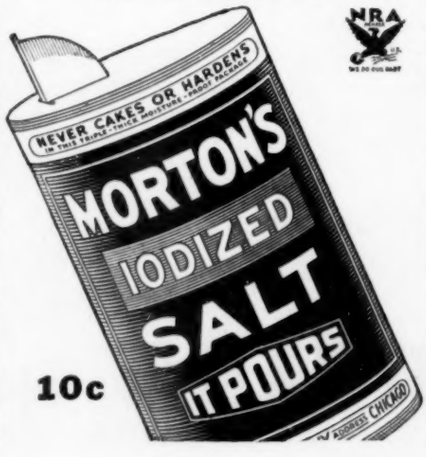
This was demonstrated by Dr. Percy Stocks, of a famous university, who compared the heights and weights of a large number of 12-year-old youngsters who had been taking iodine regularly with those of an equal number of 12-year-olds who had not.

He found that those who had been receiving iodine averaged almost 2 inches taller and about 8 pounds heavier than those who had been given no iodine. Thus proving the wisdom of protecting children from the growth-hampering effects of simple goiter!

If you want *your* children to escape being handicapped by this disorder, begin to use Morton's Iodized Salt *at once!* It is neither a drug nor medicine, but just a pure white table salt to which has been added sufficient iodine to prevent simple goiter.

The fact that Morton's Iodized Salt has been accepted by the American Medical Association's Committee on Foods is ample assurance of its reliability. Get it today and use it regularly, both on the table and in cooking.

WHEN IT RAINS IT POURS



BEARING BETTER BABIES

PLEASANT BATHS FOR BABY FORM ENJOYABLE HABIT

Nearly all children have a natural love of water—of wading in the brook, running to the edge of the ocean, walking in the rain. The mother who has the difficulty of an unhappy bath time in the home may be more at fault than the child who may have naturally loved the feeling of water until some unpleasant association made him feel otherwise.

Early beginnings make a great difference. The bath begins early to be identified with punishment after the adventures of childhood. If one falls down while wading in the new rubber boots, a bath is the answer. If there is an accident with the jam jar, a bath and bed are the order of the day. In the natural sequence of cleaning up after such childhood disasters, it may be inevitable now and then that the bath should seem a penalty.

The wise mother, however, makes these occasions as few as possible, says an article in *Junior Home*. She does even more; she counteracts the occasional unpleasant associations by surrounding other baths with happy events when she can. Regularity, pleasant associations and adequate, interesting facilities will do much to make cleanliness habits a happy part of the child's day. If early associations are pleasant to a child, bathing will be a joy forever.

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THE NEW 1934 WONDERSOFT KOTEX

brings a great change in the lives of women

HAVE you ever complained about the sanitary pads you have known? Have you ever suffered that ill-at-ease feeling with old-time pads? Then this is important news for you.

Carefully, painstakingly—for more than 2 years Kotex scientists have consulted with a great Consumer Testing Board of 600 typical American women—a project never before dreamed of. The result is now presented to all of womankind—the New 1934 Wondersoft Kotex—an achievement that ranks with the highest of all scientific contributions to the health, happiness and comfort of women.

WONDERSOFT—*third exclusive Kotex patent*

Three times in two years—vital Kotex improvements have been honored with U. S. Patent protection. ***First***—came ***flattened, tapered ends*** that made possible undetectable protection beneath the most clinging gowns, U. S. Patent No. 1,857,854. ***Second***—the ***famous Equalizer strip,*** increasing the security by lengthening the hours of protection, U. S. Patent No. 1,863,333. And now—***Third*** and most revolutionary of all Kotex improvements—the ***new 1934 Wondersoft Kotex***—U.S. Patent No. 1,946,626.

What WONDERSOFT *Kotex means to women*

The new 1934 Wondersoft Kotex is a scientific marvel of softness. A fluffy layer of soft cotton is applied to the edges—and *only* the edges. *This is important*—for chafing is prevented and the absorbent surface is left free to do its important work instantly. That—women told us—was the greatest single need in sanitary protection. Wondersoft remains gentle, marvelously soft for hours. Women by scores tell us that Wondersoft Kotex has utterly changed their lives. And—most important—this new wonder-softness has been achieved without sacrificing a single one of the priceless Kotex features you have always known. In width, thickness—in fact, all dimensions—the new Wondersoft remains the same. Once you have used the New 1934 Wondersoft Kotex—you will never forget to re-order it.

A new package—new in color, shape and design for your protection

To make sure you get Wondersoft—and no other—we introduce it in a modern new package—totally different from the Kotex box you have known.

Familiarize yourself with it at once. No other pad is or can be like it. Ask for the New 1934 Wondersoft Kotex in regular or super-size at your dealers today. Both are priced alike—and, to introduce Wondersoft Kotex, we present it at the lowest standard price ever asked for Kotex!

(Continued from page 432)

tific practice dictates the immediate disposal or disinfection of the body discharges of the patient. Scrupulous cleanliness of the patient, the attendant and the sick-room, with a prompt soap and water cleansing of the sick-room at the end of the illness, has taken the place of former fumigation. Woodwork, furniture, door-knobs and all surfaces are bathed with soap and water or with diluted disinfectant, and curtains are washed.

Bacteria do not live long away from the human body except in spore form. In this form they may lie dormant without moisture or food until they find conditions that are right for growth.

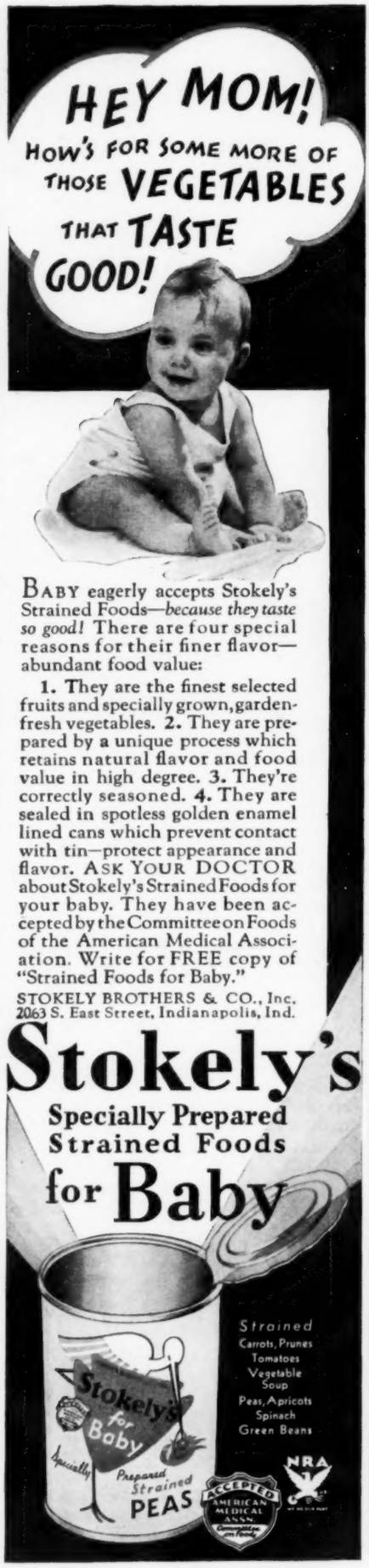
Dust is extremely irritating to the mucous membrane of the nose and throat. Therefore, it is extremely important to conduct the house cleaning in such a manner that dust is not raised into the air. A good gargle, mouth wash and eye wash should be used after it has been necessary to do a dusty piece of work. A good vacuum cleaner, used regularly for several minutes each week, will keep rugs and carpets so clean that they will not need to be beaten, although they do need cleaning occasionally with a soap solution or a dry cleaning fluid to dissolve the grease which is tracked in from the streets.

Bare floors may be cleaned, without raising dust, by using the vacuum cleaner with the nozzle lowered from the position used for a medium or deep pile rug. This is followed by rubbing the floor with a long handled dust mop which is oiled or chemically treated to make the dust cling to it. The dust mop is cleaned by being placed in front of the nozzle of the vacuum cleaner. This is a neater and more sanitary method than shaking it out the window.

A short handled furniture duster, which is light and easy to use, may be attached to the vacuum cleaner to pick up handfuls of dust. There is no need to scatter dust when one is trying to remove it. A cloth may be saturated with furniture oil, so that the dust will cling to it. Liquid wax on a cloth dissolves the greasy, smoky film on furniture and cleans wood finishes that might be harmed by water and soap.

There is a paper, for dusting fine furniture, which imparts a nice polish after it has picked up the dust. It is crumpled, used and then discarded. Paper dish-rags, which are likewise discarded after service, are obtainable.

The vacuum cleaner attachments, or a small hand cleaner, will reach


HEY MOM!
HOW'S FOR SOME MORE OF THOSE VEGETABLES THAT TASTE GOOD!
BABY eagerly accepts Stokely's Strained Foods—because they taste so good! There are four special reasons for their finer flavor—abundant food value:
1. They are the finest selected fruits and specially grown, garden-fresh vegetables. 2. They are prepared by a unique process which retains natural flavor and food value in high degree. 3. They're correctly seasoned. 4. They are sealed in spotless golden enamel lined cans which prevent contact with tin—protect appearance and flavor. ASK YOUR DOCTOR about Stokely's Strained Foods for your baby. They have been accepted by the Committee on Foods of the American Medical Association. Write for FREE copy of "Strained Foods for Baby."
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Stokely's
Specially Prepared Strained Foods for Baby
Strained
Carrots, Prunes
Tomatoes
Vegetable Soup
Peas, Apricots
Spinach
Green Beans
Stokely's for Baby
Specially Prepared Strained PEAS
ACCEPTED AMERICAN MEDICAL ASSN.
NRA

all the corners and clean door casings, draperies, overstuffed furniture, other fabric coverings and stairs. If a helper stirs clouds of dust into the air, give her a push-broom instead of the usual fiber or corn broom, and her technic will improve immediately.

Since, after a short incubation period, ordinary carpet dirt contains from 99,400,000 to 11,558,800,000 bacteria in each ounce, it should be burned immediately without being allowed to become moist and warm. The contents of the dust bag should be emptied frequently into a paper sack or newspaper, because the cleaner will clean much more efficiently when the bag is not too full. It should not be necessary to turn the bag inside out and shake it, although the outside may be cleaned with a vacuum cleaner attachment. The bag is porous and allows the air to escape into the room, while the dust is held within the bag. The texture, thickness and kind of material have been carefully selected by the manufacturer, who usually directs that the bag should not be washed, as this would remove the chemical with which it is treated, spread the threads apart and allow dust to filter into the air. If a noticeable amount of dust comes from the bag during use, the bag should be replaced. A good bag allows scarcely any dust and germs to pass through it; this has been determined by actual examination of samples of air.

Dirt from the cleaner bag, waste paper and table scraps must be disposed of promptly, in order that pets, mice, rats, flies and bacteria do not come in contact with them and thus cause a health hazard. Prompt incineration within the home is satisfactory. Do not try to kill the germs in the dirt, but rather, remove the refuse and dispose of it. Garbage should be wrapped and tied. The garbage can should be kept covered tightly, and the contents should then be taken promptly to the municipal incineration plant or otherwise disposed of in a sanitary manner. Proper disposal of sewage is likewise important to health.

Cleanliness of the bathroom is a gage to standards of housekeeping. The frequent use of soap, hot water and disinfectants will assure neatness and cleanliness. Porcelain is kept cleaner and more sanitary if the surface is not roughened by scratchy powders. Drains, including those of the kitchen sink and the refrigerator, should be cleaned and kept open.

HEALTHY, WEALTHY AND WISE

Insects may find their way into the cleanest of homes, but they are quickly destroyed by vigorous, prompt action when it is realized that they multiply and hide under crevices, behind loose wallpaper and in the cracks of floors. The wary housewife does not waste any time in starting warfare against waterbugs, ants, spiders, bedbugs or cockroaches. Some of these are difficult to exterminate. The problem seems to be that of using a sufficiently large amount of the exterminator, which should be strong and well distributed in the places in which the insects hide; the process should be repeated several times in order to kill the young insects as they make their appearance. When the new house is built, all surfaces should be smooth; finishes should be cleanable, and there should not be any ledges, crevices or cracks. Insects, mice and rats carry disease because they go into places which are dark, damp and dirty.

Cats and dogs, even when they are washed frequently, are not clean enough to be companions for tiny babies, for these animals put their feet into places which are not clean, and afterward they walk on clean rugs, even venturing into upholstered chairs. The house-fly is most careless of all about where he walks before traveling over a cake frosting or salad. Because he is so commonly seen, we forget to fear the possibility of his bringing typhoid or diarrhea, often known as "summer complaint." There are city laws forbidding the presence of places which breed mosquitoes, since they are commonly recognized as dangerous.

Mothers of small babies should be the most careful of all in the matter of cleanliness and most anxious to have clean cities, clean lawns and gardens and clean homes. The intelligent mother follows a most careful technic in protecting her baby from disease. A porch may be screened or protected with inexpensive cotton mosquito netting. Black netting is less conspicuous. A piece of netting should be thrown across the carriage or crib in which baby takes his afternoon naps. Unless there is a sleeping porch, he may sleep on this cool, protected porch on hot summer nights until grown-ups retire. Everything that touches baby should be washed and scrubbed, from the crib blankets laid on the floor for his daily romp, to his rubber toys, which inevitably go to his mouth. His clothes must be washed, boiled

(Continued on page 472)

To EVERY MOTHER OF A GROWING CHILD

These are 5 of the vital food essentials nature demands for strong, sturdy development

1. CARBOHYDRATES are needed by the busy, active youngster for vital energy.
2. FATS are needed, in easily digestible form, for reserve energy and for weight.
3. PROTEINS are needed for the development of solid flesh and strong muscle.
4. MINERALS, such as calcium and phosphorus, are needed for strong, straight bones and sound, even teeth.
5. VITAMIN D. Vitamins are needed, including Vitamin D, which helps to utilize efficiently the calcium and phosphorus in the development of the bones and teeth.

Cocomalt gives your child these 5 food essentials!

COCOMALT is a food designed to be mixed with milk, thus producing a food-drink of high nutritional value.

Not only is Cocomalt so delicious that children beg for it—it also provides the 5 nutrients every child needs to grow strong, straight, sturdy, with properly formed bones and teeth. Prepared as directed, Cocomalt adds 70% more food-energy to milk. Thus every glass your child drinks is equal in food-energy value *to almost two glasses of milk alone.*

Cocomalt is also a rich source of Sunshine Vitamin D. The valuable and highly essential Vitamin D has been added to Cocomalt, under license by the Wisconsin University Alumni Research Foundation. Every cup or glass of Cocomalt, properly prepared, contains not less than 30 Steenbock (81 U. S. P. revised) units of Sunshine Vitamin D from irradiated ergosterol.

Cocomalt is sold at grocery and good drug stores in ½-lb., 1-lb. and 5-lb. air-tight cans. Easy to mix with milk—ready in a jiffy. Delicious HOT or COLD. High in food value, economical in price.

Special trial offer: For a trial-size can of Cocomalt, send name and address with 10c to cover the cost of packing and mailing to R. B. Davis Co., Dept. 9 E, Hoboken, N. J.

ACCEPTED AMERICAN MEDICAL ASSN. Committee on Foods

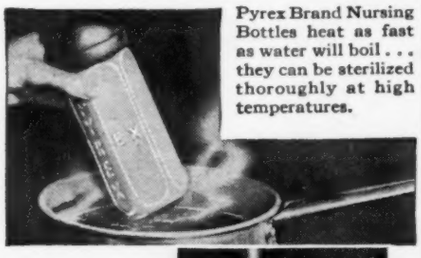
Cocomalt

Prepared as directed, adds 70% more food-energy to milk

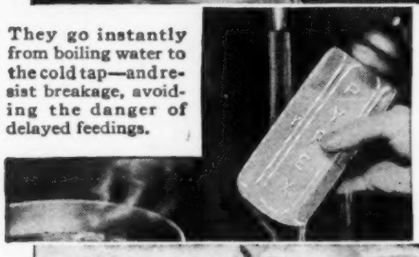
Cocomalt is accepted by the Committee on Foods of the American Medical Association. Formulated by scientists, Cocomalt is composed of sucrose, skim milk, selected cocoa, barley malt extract, flavoring and added Sunshine Vitamin D.

Mothers!

These bottles resist breakage from *Heat* or *Cold*



Pyrex Brand Nursing Bottles heat as fast as water will boil . . . they can be sterilized thoroughly at high temperatures.



They go instantly from boiling water to the cold tap—and resist breakage, avoiding the danger of delayed feedings.

Doctors and nurses recommend these safer nursing bottles to protect your baby's health.

Six-sided on the outside, rounded on the inside, with a broad, level base and clearly marked ounces. Two sizes—8-oz., with narrow neck or wide mouth, 25¢; 4-oz., with narrow neck, 15¢. So resistant to breakage that six bottles generally last for entire nursing period.

PYREX NURSING BOTTLES

Trade-mark Reg. U. S. Pat. Off.

The A.P.-UPLIFT

U. S. Pat. 1,702,922 —Invented by Mme. Poix to create the stylish upward contour; to relieve pain and remove cause of many bust troubles; also for pre-natal and nursing periods.

Sizes 30 to 44
Pink Repp.....$1.00
Pink Tussah Silk... 1.50
Pink Mesh or Jersey 2.00

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G. M. POIX, Inc.
103 Madison Ave.
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Excellent—LUCKY BREAKFAST FOOD—Nutritious
A FARINA--made from the CREAMY part of the WHEAT with FINE BRAN added.

For CHILDREN--Contains 0.7 per cent crude fiber which helps to counteract constipation due to insufficient bulk in the diet.

For ADULTS--Contains considerably more calories, weight for weight, than are found in eggs, white or whole wheat bread.

Accepted by American Medical Ass'n, Committee on Foods
Write for Free Sample
FEDERAL MILL, INC., 400 Race St., Lockport, N.Y.

Mention HYGEIA when writing to Advertisers

HEALTHY, WEALTHY AND WISE

(Continued from page 471)

and sunned. Paper bibs are discarded after use.

His bed should be kept fresh and sweet-smelling by frequent washing and airing of blankets. The mattress may be adequately and fully protected with a thick rubber sheet, and the cotton sheets which cover it should be changed every day. His training to keep the bed dry ought to be started when he is very young.

Diapers are put into cold water in a covered pail. Once a day they are rinsed in cold water, before a regular laundering in soap and hot water, and aired in sunshine if possible. Ironing is not considered necessary if the water has been sufficiently hot. Specially manufactured paper pads placed inside the diapers make less work in washing soiled diapers. Diapers are boiled frequently in order to retain whiteness; if strong washing powder or bleaching powder is used, it must be thoroughly rinsed out.

Greatest care is given to prevent the contamination of baby's food. Bottles are boiled or sterilized in steam, and dishes used in mixing the formula are washed separately from the family dishes and are thoroughly scalded. The mother who learns these points on sanitation from a hospital or a nurse is fortunate. She will notice that the nurse's hands are carefully scrubbed before she starts to mix baby's formula in the sterilized dishes.

As the infant grows sturdier and stronger, he crawls and creeps, getting into everything imaginable and pulling himself up by grasping the furniture. Then is the housekeeper's virtue on a severe test! A creeping baby can find dust in any corner; his rompers are a veritable dust-cloth! Cotton fabrics absorb less dust if they are starched and ironed to make the surface smooth. He can find many things unsuited to his tiny mouth. He can pick up all manner of bacteria which are unseen and yet may cause his serious illness and even death.

Mothers must be keen, careful, and clean, constantly alert, continuously watchful, and firm in their belief that "cleanliness is akin to godliness."

"We ought, in humanity, no more to despise a man for the misfortunes of the mind than for those of the body when they are such as he cannot help; were this thoroughly considered we should no more laugh at a man for having his brains cracked than for having his head broke."—*Pope.*

IS *YOUR* BABY SAFE?

Thousand of mothers each year choose Kiddie-Koop to protect baby's sleep and play against mosquitoes, flies and other dangerous insects, playful older children, household pets. Kiddie-Koop, with two-position spring, serves as bassinet, crib and playpen. Also ideal for baby's daily sunbath. Fully screened for complete safety at all times. Sturdy construction; beautiful finish; folds compactly without removing bedding. Kiddie-Koop is sold by most leading department and furniture stores. Ask for a demonstration.

SEND NOW FOR FREE ILLUSTRATED BOOKLET

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1151 Jay Street, Rochester, N. Y.

KIDDIE-KOOP Original Folding Screened Crib

Elmo BEAUTY PREPARATIONS are *pure!*

No matter how delicate your skin is you can safely use Elmo toiletries. For they are as pure as it is humanly possible to make them. In fact, repeated chemical analyses show the absence of any ingredient that could possibly harm the normal skin.

If you are worried about the appearance of your complexion, try Elmo beauty preparations. Give your skin the benefit of these safe, pure toiletries. There's one for every beauty need. Let Elmo make your skin lovely!

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RA-LO LOTION RA-LO FACE POWDER
MELTING CREAM CUCUMBER CREAM
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A Practical Method of reducing the strains of Modern Living

YOU MUST RELAX

By Edmund Jacobson, M. D.

When physicians prescribe rest for their patients they often find that the patient does not know how to relax. This book will tell him how. Written in clear simple language, it expounds the technique of cultivated relaxation first presented in Dr. Jacobson's technical book, **Progressive Relaxation.** Here for the person with "jangled nerves" is a guide to saner and healthier living.

$1.50 WHITTLESEY HOUSE New York

Cosmetics and Allied Preparations

A pamphlet of 32 pages which should lie on the office table within easy reach of waiting patients. This is a much needed treatise on nostrums of the cosmetic type widely advertised, and sold indiscriminately to the public. Give your patients the benefit of reading this booklet. Price 15 cents. ***Ask for a complete list of Nostrums and Quackery pamphlets.***

AMERICAN MEDICAL ASSOCIATION
535 North Dearborn St., CHICAGO, ILL.

A HOUSEWIFE LOOKS AT THE COMMITTEE ON FOODS

(Continued from page 445)

statements are meaningless, misleading and deceptive by implication and are not permissible." Proper diet, rather than chewing on hard foods, builds the teeth by supplying the proper bone-building materials. Vegetables are splendid for this purpose.

Any special information regarding sieved vegetables should be given on the label. One brand supplies a definite amount of added vitamin D (irradiated ergosterol); the manufacturer would be sure to mention this addition, since it is a selling point for his product. A baby soup which includes meat broth and cereal as well as sieved vegetables has a special appeal to mothers.

Many mixtures of vegetables, or of vegetables with cereals and meat broth, are available, as well as sieved asparagus, beets, celery, carrots, green beans, peas, spinach, tomatoes and wax beans. Color and flavor are indicative of quality and special care in manufacture. Those methods which retain the finest flavor are most likely to retain the most mineral salts and vitamins. For adult taste, salt may be added to those sieved vegetables which are packed without salt.

The doctor's advice must be followed in feeding babies, for Committee decisions do not allow the printing, in advertising material, of definite directions for such feeding. The condition of the individual child or patient decides the amount that should be fed. Doctors often order sieved vegetables for babies as young as 4 months of age, depending on the condition of the child. Usually the first feedings are 1 teaspoonful for the first few days. One vegetable is given until the baby becomes accustomed to it; this usually takes ten days or more. This is economical, because the same can of food may be used for successive feedings if it has been promptly covered and properly refrigerated. A piece of waxed paper held in place with a rubber band provides a good covering. When a second vegetable has been started and given until the baby becomes accustomed to it, the first one is given for a while again. In feeding babies, a mother should introduce only one new food at a time into the regular menu, in order to observe its effect. A teaspoonful of some vegetables is extremely laxative for a baby. The young baby does not object to monotony, and he does not have a sophisticated notion about flavor;

(Continued on page 475)

MY MOTHER'S AWFUL FUNNY! NEVER LETS ME EAT 'LESS I WASH MY HANDS FIRST
MINE DOESN'T EITHER! BUT I LIKE TO WASH NOW. IT'S A GAME! C'MON OVER TO MY HOUSE AND I'LL SHOW YOU!
SEE THAT? THAT'S A LIFEBUOY WASH-UP CHART. YOU SCORE A POINT EVERY TIME YOU WASH. THEN YOU WIN A HEALTH GUARD BADGE—I'VE ALMOST GOT MINE!
GOSH! COULD I GET ONE, TOO?
SAY, MOM. COULD YOU GET ME A WASH-UP CHART LIKE BILL'S? HIS MOTHER SAYS YOU JUST WRITE AND ASK FOR IT
OF COURSE, JIM! I'LL DO IT RIGHT AWAY!
REMEMBER, DEAR, HOW JIM HATED WASHING HIS HANDS? WHAT A BLESSING THAT LIFEBUOY CHART IS! HIS HANDS ARE ALWAYS CLEAN NOW
AND I NOTICE THAT HE'S NEATER IN OTHER WAYS, TOO. LET'S REWARD HIM WITH A TRIP TO THE CIRCUS!

MOTHERS can hardly believe their eyes when they see how the Lifebuoy Wash-up Chart makes children actually *eager* to wash hands often. It does away with all the scolding, nagging, unending squabbles to keep active little hands clean.

With the Lifebuoy Chart making a game out of a tiresome chore, clean hands quickly become a habit. Other habits of cleanliness develop, too. Hair brushed more often. Clothes kept more tidy. More baths.

A vital health lesson

The Lifebuoy Chart gives reasons why cleanliness is important, especially clean hands. It shows, in a picture-book story, how hands pick up germs from almost everything we touch—books, doorknobs, shoes, pets. It shows how to protect hands from germs and safeguard health by washing often—*always before meals*—with germ-removing Lifebuoy Health Soap.

Youngsters really *enjoy* Lifebuoy. They like its bright coral-pink color, its extra-clean scent, its wealth of rich, creamy lather.

FREE! To parents for each of their children—a wonder-working Lifebuoy Wash-up Chart and school-size cake of Lifebuoy. Simply fill in and mail coupon now. Your dirty-hands worries will be over. And the children will have an exciting new game.

LIFEBUOY
HEALTH SOAP
for face, hands, bath

free

This offer good in U. S. and Canada only.

LEVER BROTHERS CO., Dept. 195, Cambridge, Mass.

Please send me, free, Lifebuoy school-size cakes and Wash-up Charts for my.....children.

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Teachers! Make Use of the American Medical Association's

HELPS for HEALTH TEACHING

In addition to the wealth of health teaching material in HYGEIA each month, the American Medical Association publishes a variety of pamphlets, books, plays, charts, and posters which you can use to advantage in teaching health. Make use of this *authentic* material! Note the following and order by number:

HEALTH PLAYS

1—**The Good Health Elves**—17 to 25 characters. 15c a copy. Set of 17 for $2.00.

2—**The Trial of Jimmy Germ**—8 characters. 10c a copy. Set of 8 for 35c.

3—**The Friendly Brushes**—11 characters. 10c a copy. Set of 11 for 50c.

4—**The Magic Fluid (The Diphtheria Antitoxin)**—8 characters. 10c a copy. Set of 8 for 35c.

5—**On Board the S. S. Health**—20 characters. 10c a copy. Set of 20 for $1.00.

6A—**The Gift a King Accepts**—15 characters. 10c a copy. Set of 15 for $1.10.

7—**The Jolly Smiles Crew**—11 characters. 10c a copy. Set of 11 for 50c.

8—**A Syncopated Health Trial**—8 characters. 10c a copy. Set of 8 for 35c.

9—**The Animals Protest**—6 characters. 10c a copy. Set of 6 for 30c.

10—**The Trial of Johnny Jones**—35 characters. 10c a copy. Set of 20 copies for $1.00.

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13—**The Story of Life**—for boys and girls 10 years of age.

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Written by Dr. Thurman B. Rice.

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25—**Mental Hygiene in Home and School.** 5c

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33—**School Children's Eyes**, by Dr. Frank Allport. 10c.

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36—**Health Essentials for Rural School Children.** 15c a copy. 100 for $8.00.

37—**Health Improvement in Rural Schools.** 25c a copy.

38—**Health Service in City Schools.** 25c a copy. 100 for $15.00.

39—**Daylight in the Schoolroom.** 5c a copy. 100 for $3.00.

40—**Health Education, A Program for Public Schools and Teacher Training Institutions.** Paper cover, $1.25. Cloth cover, $1.75.

41—**Conserving the Sight of School Children.** 35c.

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43—**Ventilation of School Buildings.** 15c.

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46—**Diphtheria**, by Dr. George H. Weaver. 15c.

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The New Healthyland

54—A colorful big picture book containing a collection of the best children's health material from HYGEIA. 168 pages of stories, rhymes and pictures. Size 8½x 11½. $2.00.

HYGEIA, The Health Magazine

Authoritative information on practically every phase of health. A special department every month, "School and Health," edited by Dr. J. Mace Andress, is full of practical helps for health teaching. A 48-page booklet, "Health Teaching Plans from HYGEIA," containing 27 health teaching projects from this department, will be sent free with each teacher's subscription to HYGEIA.

55—One year of HYGEIA, $2.50.

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against bottle breakage from any cause

A most amazing offer

To THE purchaser of six Hygeia Nursing Bottles and six Hygeia Breast Nipples we now issue a Guarantee Certificate against bottle breakage *from any cause whatsoever.* Details in the new silver and blue cartons—at your druggist's. The wide-mouthed Hygeia Bottle needs no brush or funnel to fill it. The Hygeia Nipple is shaped like mother's breast. Patented tab keeps fingers from sterilized inside surface. Patented reinforced base prevents nipple collapse. Dirt causes colic. Use Hygeia Bottles and Nipples. They are easily cleaned.

Hygeia
The Safe Nursing Bottle

Every Baby Needs It

TEETERBABE
JUMPER SEAT
AUTO SEAT
HIGH CHAIR
Three in One

A great aid to mothers in caring for baby. A jumper seat that gives baby the exercise it needs to strengthen its abdominal muscles. An auto seat that is absolutely safe. When placed on an arm-chair, it takes the place of a high chair. Three necessities at the price of one. Get yours today. Ask your dealer — or write for FREE circular.

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A HOUSEWIFE LOOKS AT THE COMMITTEE ON FOODS

(Continued from page 473)

a taste of his milk formula will convince you of that. The younger the baby is when vegetables are started, the better food habits he will form; always follow the doctor's orders, however. In large institutions there are no finicky babies; they get good food and eat it because they have no fussy parents around.

Generally it is better to feed the sieved vegetable to the baby from the tip of a teaspoon. In that way you may be sure that he is actually eating it. Mixing foods together is regarded with disfavor; ordinarily it is better not to mix vegetables with milk, since the baby may become tired of the mixture more easily than of the two foods taken separately. The sieved vegetable may be served lukewarm or as it comes from the can.

The older baby who is allowed butter may relish the sieved vegetable mixed with a small amount of butter. The convenience of these canned vegetables means that there will be little extra work for mother if, as the child grows older, he continues to eat them instead of the highly seasoned vegetables prepared for adults. Children prefer them to fried foods and to those seasoned with vinegar. For the older child who prefers food hot rather than warm, the can may be heated in boiling water for ten minutes before being opened. The vegetable should be served immediately for best conservation of flavor and vitamin C. Do not empty out the vegetable into a pan, so that the vegetable stands in the air; under such a condition it absorbs oxygen and becomes subject to vitamin destruction on reheating. Destruction of vitamin C appears to result from the process of oxidation, which is accelerated by heat. The small cans are convenient for traveling or for picnics, when a child is liable to eat the wrong kinds of foods. A can opener should be used which will cut the top out of the can and leave the edges smooth.

Sieved vegetables may form the bases for dishes which are attractive and tasty, yet simple and nutritious. Usual combinations call for milk and eggs or some other thickening agent such as gelatin, cornstarch or flour. When the diet allows such additions, recipes for adults may include the following for flavor: salt, smoked salt (prepared for curing meats), pepper, paprika, cayenne pepper, Worcestershire sauce, tabasco sauce, meat or cooking sauce, mushroom sauce, kitchen

(Continued on page 476)

The Easy-to-Use Prize goes to these 2 New Deodorants

SAY goodbye to old-fashioned deodorants! Perstik and Perstop give you the protection you need, in the manner that's modern.

"I need odor prevention alone," says the woman who doesn't perspire much, "and I love the neat, lipstick way Perstik is applied. *A few quick strokes under the arms each morning give me complete protection for the day.* No muss or fuss . . . it's on without using the fingers. It's greaseless, and harmless to fabrics —I use it before or after my dress is on. Just as easy to apply on sanitary napkins. I adore the handsome black-and-ivory case that Perstik comes in."

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A HOUSEWIFE LOOKS AT THE COMMITTEE ON FOODS

(Continued from page 475)

bouquet or a vegetable flavoring extract, bouillon cubes, vinegar, lemon juice or mustard. Adults accustomed to highly seasoned foods will find that the sieved vegetables need such additions to please the palate. Baked dishes may be topped with buttered bread crumbs. Jellied salads may be served with lettuce and mayonnaise. Cheese or mushrooms add flavor to peas and spinach.

Carrots may be put into such enticing puddings, custards and even ice cream that little children only know that the food is golden yellow and fine in flavor. Spinach soufflé, an airy concoction of egg whites baked in a slow oven, or cream of asparagus soup will tempt the most rebellious of young patients.

[NOTE.—In the June HYGEIA, Mrs. McCray will discuss evaporated milk. Lists of the accepted foods discussed each month will be sent on receipt of 6 cents in stamps.]

WHY DENTISTS AGE PREMATURELY

"Business must be good for you, Doc, I see you have a new car."

"You say $2, Doc? Well, here it is. If you take that much in every hour of the day, you don't do so bad, do you?"

"I know it's Sunday, Doc, but I kept thinking all week it would quit hurting."

"Just put it on my brother's bill and he will take care of it."

The patient who tries to score a bullseye in the cuspidor without removing his head from the headrest.

"So-an-So wanted to charge me $25, but I got some Blank mouth wash and cured my pyorrhea myself."

"Does that silver cost much, Doc?"

"Yes sir, Doc. So-an-So first put his feet in my stomach and then he pulled me clear out of the chair and when he finally got the tooth we were both on the floor under the sink."

"Doctor, that seems like a lot of money. The Painless Dentists advertise fillings for a dollar."

"I'm sorry, Doctor, that I can't pay more but my husband's life insurance is due next week."

The patient who has to tinker with the matrix retainer while you are mixing the alloy.

—*Anonymous.* Reprinted from the *Indiana State Dental Association Journal.*

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Make It Easy For a Mother To Train Her Child

Double Duty Panties are an exclusive creation by VANTA, designed to help mothers train their kiddies.

VANTA thought of comfort for the little ones that wear these panties, too, and scientifically made them fit without binding. They're snug but at the same time allow plenty of room for free movement; they're tailored with no rough unsightly seams that will rub and chafe.

The VANTA Red-Heart Label is always on the outside and front, so toddlers can easily learn to dress themselves.

The name "Double Duty Panties" is especially appropriate for the thick reinforced crotch is *doubly absorbent.* Three styles: fitted front and elastic back; all elastic waistband; or button back, suitable for wear with the VANTA Knit Waist.

"THE TODDLER"—a 32-page book, with helpful suggestions to parents on child training during the age of two to six. Obtain a free copy from your VANTA dealer or write us direct. Address Department H 5.

"BABY'S OUTFIT"—80 pages illustrated in color on the care and proper clothing of tiny babies. If there's a small baby in your home, you'll find this booklet invaluable. Sent free upon request. Address Department H 5.

"Next to your Baby— There's nothing like VANTA"

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MILK ALBUMIN FOR BABY FOOD MADE CHEAPLY BY NEW METHOD

A new method and factory-scale apparatus for recovering milk albumin from sweet whey, with the natural properties of albumin unimpaired, has been devised recently by scientists of the Federal Bureau of Dairy Industry, according to an announcement by the U. S. Department of Agriculture. The Bureau estimates that the powdered albumin can be produced for less than 50 cents a pound and that its chief value will be its use as an ingredient of modified infant foods, which commonly retail for about $1 a pound. It can also be added to cow's milk, under supervision, to make it more suitable for infants.

The albumin of milk resembles the albumin of egg and has high nutritive value. Cow's milk, which contains less than half as much albumin as human milk, has a tendency to coagulate in large masses which digest slowly in the infant stomach; human milk coagulates in the stomach in fine flocks and is easily digested. The addition of the powdered albumin to cow's milk serves not only to raise the albumin content but to change the physical properties of the milk so that when it is acted on by the acids of the infant stomach it is coagulated into finely divided curd much like that of human milk.

In the new method developed by the bureau, the sugar may be crystallized from concentrated sweet whey, leaving a mother liquor that contains some of the sugar, most of the minerals, and all the albumin. This liquor may be dried without affecting the solubility of the albumin, but the salt content of the resultant powder is so high that it is not suitable for modifying cow's milk. The scientists found, however, that the greater part of these salts can be removed without affecting the other constituents by subjecting the mother liquor to electric dialysis before drying it, and they have devised an apparatus in which this can be done on a factory scale.

The nurses' daily records are delicate barometers of conditions. This was brought home to me as I watched our statistician sticking her pins in the map that shows the current cases of pneumonia, and observed an increasing number of blue pins in the Syrian quarter. Inquiring into this, I was told that the children of the kimono workers then on strike were probably getting less milk and good nourishment, and hence their resistance was lowered.—Lillian D. Wald in *The Atlantic Monthly.*

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Send name of grocer and 20 cents for full size sample package.

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JAPAN'S HOSPITAL SYSTEM BLENDS ULTRAMODERN AND ARCHAIC

In introducing a discussion of the hospital system of modern Japan, a writer in *The Trained Nurse and Hospital Review* offers the reminder that because Japan has changed within an ordinary life span from a country bound by many centuries of tradition to a nation alive to world affairs, it is today a land of paradoxes. Hospitals are not exceptions to this rapid but incomplete change; there is found a bizarre blending of the ultramodern and the archaic.

Since the disastrous earthquake of 1923, Japan has, in the affected areas at least, attempted to provide the right type of hospital building. To make them earthquake-proof, these hospitals are more substantially built than those of America or Europe; but because western architects were not consulted, large rambling structures are the rule. Much also remains to be done to satisfy modern hygienic standards.

Laboratory equipment is often up to date, and money always seems to be forthcoming to purchase the latest instrument that may be required for research, but in too many cases the mere possession of instruments is deemed sufficient; they are not used as much as they might be.

It is most unfortunate that the few qualified hospitals of Japan are surrounded everywhere by buildings which serve as clinics but which should have been razed years ago. These unsanitary shacks are a part of the system of private medical practice that is prevalent. It is the ambition of every young Japanese practitioner to acquire one of these small private hospitals for lying-in cases, major and minor operations, and for all cases that would normally be treated in much larger and better equipped institutions.

A phenomenon which seriously hampers hospital staffs in controlling disease as well as in curing the sick is the custom that permits members of the patient's family to sleep in the same room with him during the illness. This is not only tolerated in many hospitals but often encouraged, as it is considered a safeguard to the hospital authorities if the patient should die.

Although praiseworthy advance is being made in Japanese medicine and hospitals, there are the stumbling blocks of red tape in the Japanese social code, official apathy, the commercialistic system with its many private clinics and frequent charlatanism, coupled with the background of superstition.

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Does your skin betray a long record of winter exposure—months of dry, steam-heated air indoors, of wind and snow outdoors? Restore your complexion to softness and freshness—by using Nivea Skin Oil!

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A few drops of Nivea Skin Oil every day—gently rubbed into the exposed skin of your face, neck and arms—will soon bring decided improvement. You will find Nivea excellent and economical as powder base, night cream and cleanser. It is so bland and soothing that doctors often recommend it for the delicate skin of small children.

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"I wonder if it's loaded, I'll just look down the barrel and see."

"Oh, listen! That's the train whistle. Step on the accelerator and we'll try to get across before it comes."

"They say these things can't possibly explode, no matter how much you throw them around."

"I guess this rope will hold my weight."

"It's no fun swimming around in here. Let's go out beyond the life lines."

"These traffic cops can't stop me."

"What a funny noise that snake makes. I think I'll step on him."

"Which one of these is the third rail, anyway?"

"That firecracker must have gone out. I'll light it again."

"What's wrong with you? You can't see the scenery unless you lean out."

"It smells like gas, but I guess it's all right. Lend me a match."

"I took some medicine in the dark, and I must have got hold of the wrong kind."

"I'm going up on the roof to cool off."

"I'm not afraid to walk on the track."

"Let's change places, and I'll paddle."

—*James Waldo Fawcett.*

The SEX TECHNIQUE IN MARRIAGE • By I. E. Hutton, M.D.

"Dr. Ira Wile describes the book as a clear, succinct, non-emotional, authoritative and conservative exposition of the practical factors involved in making marriage successful on the sexual level. That describes the book exactly . . . It is primarily concerned with the conduct of the honeymoon and with the technic of the sexual performance." —Hygeia.

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If you attended the World's Fair you probably did. Anyway, you can read about this and other medical marvels in a new booklet on "A Century of Progress in Medicine." It contains all the material on this subject which appeared in HYGEIA during a Century of Progress Exposition—an editorial by Dr. Morris Fishbein, an article by Dr. Thomas G. Hull, and numerous pictures of medical exhibits and other views from A Century of Progress. This beautiful booklet of 20 pages is printed on heavy, glossy paper. Size, 8½ x 11½ inches.

25 cents a copy. Order from

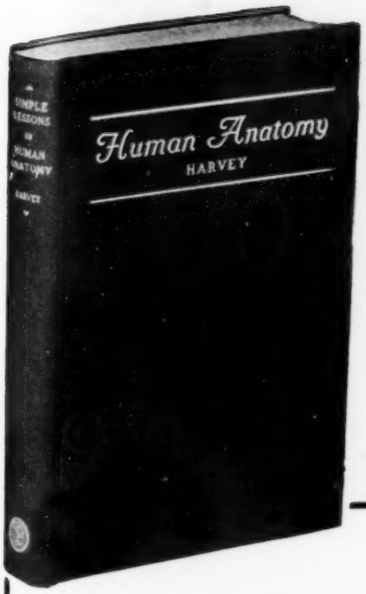
AMERICAN MEDICAL ASSOCIATION

535 North Dearborn Street, Chicago

FIREMEN AND HEALTH OFFICIALS

"The analogy between fires and communicable diseases is a very close one," observes the Iowa state department of health. "Every fire has a definite cause and usually a small beginning, just as every epidemic of disease has its origin in a single case. The flames of a conflagration increase in height, heat and destructive power to a maximum and then gradually recede. In like manner, every outbreak of infectious disease increases to a peak when the most cases are reported, and then subsides. No fire can rage without combustible material; no epidemic can get under way without susceptible persons. A fire may smoulder and break out anew unless checked; similarly infectious disease may be very subtle and insidious in its manner of spread until investigated and brought under control." The health officials are as deserving of recognition as are the fire fighters.

A mere increase in knowledge is not enough to safeguard health and prevent disease; the knowledge must be understood, accepted and practiced by the people.



Know the Human Body

Simple Lessons in HUMAN ANATOMY

by Dr. B. C. H. Harvey

Here are the articles by Dr. Harvey which appeared as a series in HYGEIA for two years—published in book form in response to the demand of HYGEIA readers.

Several changes were made, however, in the original manuscript. Two entire chapters were added, a number of new illustrations are shown, and various new subheads serve to simplify the material.

"Simple Lessons in Human Anatomy" furnishes a complete picture of the structure of the body and of the way it works. While it makes no reference to disease, it gives a knowledge of the human body that should help prevent the occurrence of disease.

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One day the store man mentioned that Mary was buying cheap things to eat on her way from school. No wonder she didn't want dinner! I asked our family doctor about it. He said she was palling her appetite with highly flavored sweets.

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